Tourism, Parks and Recreation in the Yukon River Basin

YUKON
RIVER
BASIN
STUDY

This project was completed for the Yukon River Basin Study, an intergovernmental study funded by the Governments of Canada, Yukon and British Columbia.

Descriptive Synthesis

Yukon
Department of Renewable Resources

TOURISM, PARKS and RECREATION in the YUKON RIVER BASIN

Descriptive Synthesis

Volume I: Main Report
and
Bibliography

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July 31st, 1984

Mr. W.G. Whitely
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Dear Mr. Whitley:

I am pleased to submit 25 copies of each volume of the report "Tourism, Parks and Recreation in the Yukon River Basin".

Volume I:	Descriptive Synthesis
Volume II:	Map Folio (10 coloured and 15 uncoloured sets)
Volume III:	Appendicees

The report represents a descriptive systhesis of tourism, parks and recreation in the Basin, and compliments the more detailed inventory and analysis studies of the Basins' lakes and rivers, carried out for the Tourism, Parks and Recreation Work Group, by Reid Crowther and Partners Ltd. and Howard Paish and Associates Ltd. However, additional information is required on the Basin's historic and archaeological resources, to compliment the data and analyses presented in the above studies.

I would like to express my appreciation to the Yukon River Basin Study, the Tourism Parks and Recreation Work Group and the Government of Yukon Departments of Renewable Resources and Tourism, Recreation and Culture for their help and support.

Yours sincerely,

Cathryn Paish

Cathryn Paish

ACKNOWLEDGEMENTS

Many people were instrumental in the preparation of this report through provison of information, discussion of their areas of expertise and review of various sections of draft reports.

I would like to take this opportunity to thank the members of the Tourism, Parks and Recreation Work Group; Marg Crombie, John Spicer, Paul Burton, Roberts Dalziel, Jim Masyk and Al Hodgson, for information, advice and guidance throughout the project. A special thanks to Tony Hodge who provided valuable direction and support; to Don Hutton for his help during the early stages of the project; and to Howard Paish for his continued advice and assistance.

Information on specific components of this study would not have been possible without the help of the following individuals: Barney Smith, Doug Larson, Dave Mossop, Rick Farnell, Norm Barichello and Teena Fox from YTG Wildlife Management Branch; Findlay McRae from YTG Land Planning Branch; Paul Burton, John Spicer, Dale Perry and Rob Ingram from YTG Department of Tourism, Recreation and Culture; Darwin Wreggitt from YTG Land Branch; Jeff Hunston from Council for Yukon Indians and Aileen Horler from Department of Fisheries and Oceans. Thanks also to the many people who responded to my numerous written requests for often long lost reports and hard to find data.

Elaine Irving, Jennifer Morrison and Sheryl Sim deserve special thanks for the monumental task of typing and word processing of the report, as do Manfred Jansen and Thom Rodgers for their map drafting and cover illustration.

EXECUTIVE SUMMARY

Introduction

This document and its accompanying appendices and maps set out the results of the original thrust of the Tourism, Parks and Recreation Work Group of the Yukon River Basin Study, namely - The Synthesis and Analysis of Relevant Data and Information on Tourism, Parks and Recreation in the Basin.

From the outset the work group recognized the extremely diffuse and fragmented nature of the issues, concerns, jurisdictional and administrative responsibilities and information base for tourism, parks and recreation. Clearly the three topics are inextricably linked, yet their day by day administration - or lack of it in the case of recreation - showed virtually no cohesiveness.

Accordingly the work group assigned its initial limited budget to the synthesis and analysis assignment set out here, with the objective of providing a status report from which the work group could then make its projections.

This assignment has been carried out under contract by Ms. Cathryn Paish through the YTG Department of Renewable Resources.

Early in the information gathering stage, the absence of recreational capability data, a key piece of information, became apparent. Additional funds were obtained and a contract was issued to Reid Crowther and Partners Ltd. to prepare an "Inventory, Analysis and Evaluation of the Recreational Capability of the Yukon River Basin".

When that assignment was completed it became apparent that a simple systematic assembly of basic physical and use features of the

Basin's aquatic recreational resources was still lacking and a small contract was issued to Howard Paish and Associates Ltd. to assemble this data from existing sources.

The results of these two additional assignments have been incorporated into this Descriptive Synthesis.

WORK METHOD

Information was assembled from:

- A comprehensive review of existing reports, files, correspondence and other fixed data sources.
- Interviews with representatives from government, private groups, businesses and individuals involved in Tourism, Parks and Recreation in the Basin.
- Analysis and synthesis of the information to establish its relevance to the Basin Study objectives through this assessment, and to establish the most appropriate method of using and presenting it, i.e. interim reports, written reports, maps, etc.

REPORT FORMAT

The results of this synthesis and analysis have been set out as follows:

- A written report.
- A detailed map folio (1:250,000 and 1:1,000,000) to illustrate the report.
- An appendix volume expanding on the information summarized and synthesized in the main report.
- A comprehensive four part bibliography and list of agency and individual contacts.

RESULTS

The following points summarize the "Conclusion" section of the main report (a 17 page section recommended to the reader).

I. General Conclusions

A) Coordination and Cooperation

The lack of coordination among the numerous agencies and levels of government responsible for tourism, parks and recreation results in:

- A lack of a resource and use-oriented policy, since activities reflect fragmented agency priorities, not a regard for the resources and their users.
- Both duplication of effort and significant deficiencies in basic information.
- A lack of continuity and consistency.
- A lack of a standardized information, storage and retreival system.

The best use of the Tourism, Parks and Recreation resources will not be achieved until this policy void and lack of coordination and cooperation is remedied.

B) Continued Assessment of the Basin's Lakes and Rivers

There is a need to entrench the data gathered during this assignment in such a manner as it can be used for decision making purposes, and can be systematically updated.

C) Coordinating Resource Base and Use and Demand Information

A major weakness stemming partly from (A) above is the lack of coordination between basic resource supply, use an demand information, policy and programmes.

Any sound policy and management programme for Tourism, Parks and Outdoor Recreation must be based on a thorough understanding of this basic supply/demand equation.

D) The British Columbia Portion of the Basin

The B.C. portion of the Basin is not considered a high priority by the Province for obvious access and logistic reasons.

Tourism development for the B.C. portion of the Basin is logically a Yukon interest and specific coordination between B.C. and Yukon is in the interests of both governments.

(II) Specific Conclusions

A) Tourism

1. Wilderness/Adventure Travel

There is real potential for this sector of the tourism industry, but it will be very dependent on the resource supply/demand understanding referred to under (I)(C) above.

2. Destination Areas, Features, Services and Facilities

There is a clear need for more site-specific tourist attractions to keep tourists in the Basin longer.

There is considerable potential for coordination between tourism, parks, planning and renewable resource sectors concerning natural resources.

Further, there is a need to improve and develop man-made attractions, and a need to continue the development of off-season attractions.

The trend to bus tour/mass modes of transportion will require changes in existing facility operations and infrastructure.

3. Tourism Planning

There is a continuing need for comprehensive, long term tourism planning.

4. The Economics of Tourism

The increasingly important role of tourism as a stable element of Yukon's economy (the leading private sector in 1983), requires the continued incentive support provided by senior government, to enable the industry to reach self-sufficiency.

B) Parks

1. Park Planning

There is an opportunity to better integrate the use of existing parks and the development of new ones, into a cohesive park programme for the Basin and the region.

Different types of parks can and should complement one another and tourism and outdoor recreation development programmes.

Particular areas of interest and concern requiring attention include:

- Proposed National Historic Park status for the Chilkoot Trail.
- Continued development of historic features at Dawson.
- Interpretation and ongoing management for Kluane Park and Atlin Wilderness Park - particularly their links to tourism.
- Proposed Canadian Heritage River System status for the Thirty Mile section of the Yukon River.

2. Government of Yukon

There is a need to develop a systematic approach to park planning and development to fully implement the Government of Yukon's mandate for park management. However, this apparently straight-forward objective is compounded by the fragmented inter-agency issues referred to in general conclusion (I)(A).

3. Park Potential

There is a need for a systematic review of the actual status of the many park and special status area proposals that currently exist within the Basin, to meet concerns expressed in (1) and (2) above.

Serious consideration must also be given to other forms of designations than outright "parks".

C) Heritage Resources

1. Balanced Representation of Heritage Resources

While the Gold Rush has been the most significant event in the Basin's history in terms of effects on subsequent developments, there is a need to give much more consideration to other heritage resources.

2. Condition of Important Historic Sites

Attention must be given to the run-down status of identified key historic resources such as Silver City and Dalton Post.

3. Heritage Resource Impact Assessments

Heritage resource impact assessments should be a part of any proposed land or water development.

4. Heritage Legislation for Yukon

Proposed new Heritage legislation for Yukon will help address some of the concerns outlined above.

D) Outdoor Recreation

1. General Conclusions

(a) Since outdoor recreation is a significant social and economic activity, there is a need to consider it as a serious and legitimate resource use requiring a systematically developed policy and management programme.

(b) There is an urgent need to develop a far bettter understanding of user patterns and trends to complement the supply/demand issues referred to elsewhere in this report.

2. **Campgrounds and Other Services and Facilities**

(a) A more systematic approach is now being taken to ensure that facilities match user needs, and this will improve with better user information.

(b) There is a considerable potential to develop access to, and interpretation of unique and representative natural features of the Basin as destination features. These developments should be carefully linked to campground planning.

(c) The provision of designated wilderness campsites may be required on heavily used rivers.

(d) Continued cooperation between the private and government sectors on facility development should be encouraged.

3. **Boating**

(a) Hazardous water conditions and relatively short seasons limit the growth potential for lake oriented, small craft boating.

(b) There is, however, a considerable potential for expansion of canoeing, and an outdoor recreation policy and programme should pay particular attention to this potential.

4. **Sport Fishing**

(a) In view of the fragile nature of fish resources in northern latitudes, there is a need for a comprehensive sport fish management programme for the Basin. This does not seem to be a high priority of the Department of Fisheries and Oceans for the Yukon portion of the Basin, and Government of Yukon is actively seeking management responsibility.

(b) There are serious limitations in the information available for both the resource base and its use, particularly use by Yukon residents.

(c) There is a particular need in this sector to better coordinate the activities of various government agencies and the private sector to avoid both over use and user dissatisfaction.

5. **Wildlife**

(a) There are clear links between certain recreational uses of wildlife and water. For example, with respect to habitat; use and access in the case of waterfowl and moose, existing and potential interactions and conflict between bears and recreationists and potential impacts in the case of perigrine falcons.

(b) Since waterways provide good access into pristine areas for all types of users, the whole question of non-consumptive use requires far more consideration with respect to its importance to users, managability, economics and potential compatibility or conflict with hunting.

(c) A very practical and important wildlife/recreation issue is that of bear/human interaction, since bears and recreationists are often using the same waterways during salmon migrations.

Continuing information and education programmes offer one of the best solutions.

(d) Raptors, particularly perigrine falcons have high aesthetic and interest values to recreationists and at the same time are extremely sensitive to disturbance.

In view of the considerable effort that has been put into enhancing and protecting these birds, special user-management and information programmes are necessary to maintain a balance between recreational/user interest and potential disturbance.

6. Recreational Cottaging

Virtually all of the sites capable of supporting subdivision-type cottaging reasonably close to Whitehorse (the main demand center) have been developed. However, alternatives for more innovative, smaller developments exist, and these will likely provide the basis for future cottaging.

7. Outfitting

A conflict exists between the licenced guide outfitters, who have traditionally guided hunters, and the newly emerging wilderness guiding sector.

There is a potential for competition and even overcrowding that will have to be resolved as a policy issue.

E) Development Impacts on Tourism, Parks and Recreation

1. General Conclusions

Recreational water use by residents and visitors is increasing in the Basin. At the same time, other water resource developments such as hydroelectric development, placer mining and access to such developments, which may have potentially conflicting impacts on recreational water use, are being actively pursued. It is crucial that current and potential recreational values of potentially impacted waterways are identified and considered as part of any water related planning and development.

2. Hydroelectric Development

Potential hydroelectric development in the Basin would involve permanent irreversible changes to the affected aquatic system; changes which must be addressed within a regional (northern) context and at a site-specific level. The Basin is rich in natural accessible lakes that no reservoir can really match and the potential for reservoir related recreation opportunities in the Basin are limited.

It is perhaps best to acknowledge the economic and value judgment trade-offs that have to be made between efficient hydroelectric energy development and water related recreational values, than try to rationalize compromises.

3. Back Country Access

Back country roads are an important component of water related outdoor recreation in the Basin, because of the ready access they can provide to streams and lakes.

Although YTG is responsible for post construction road management in Yukon, little has been done towards managing these roads. It is imperative that a policy for dealing with back country access and its relationship to other land and water uses be developed within YTG.

4. Placer Mining

Historic placer activity is recognized as being a component of tourism in the Basin, however, the relationship between ongoing placer activity and current and potential tourism has not been dealt with conclusively. In addition, there is some concern about the impacts of current and potential placer activity on the aesthetic quality and recreational value of important recreational rivers and streams.

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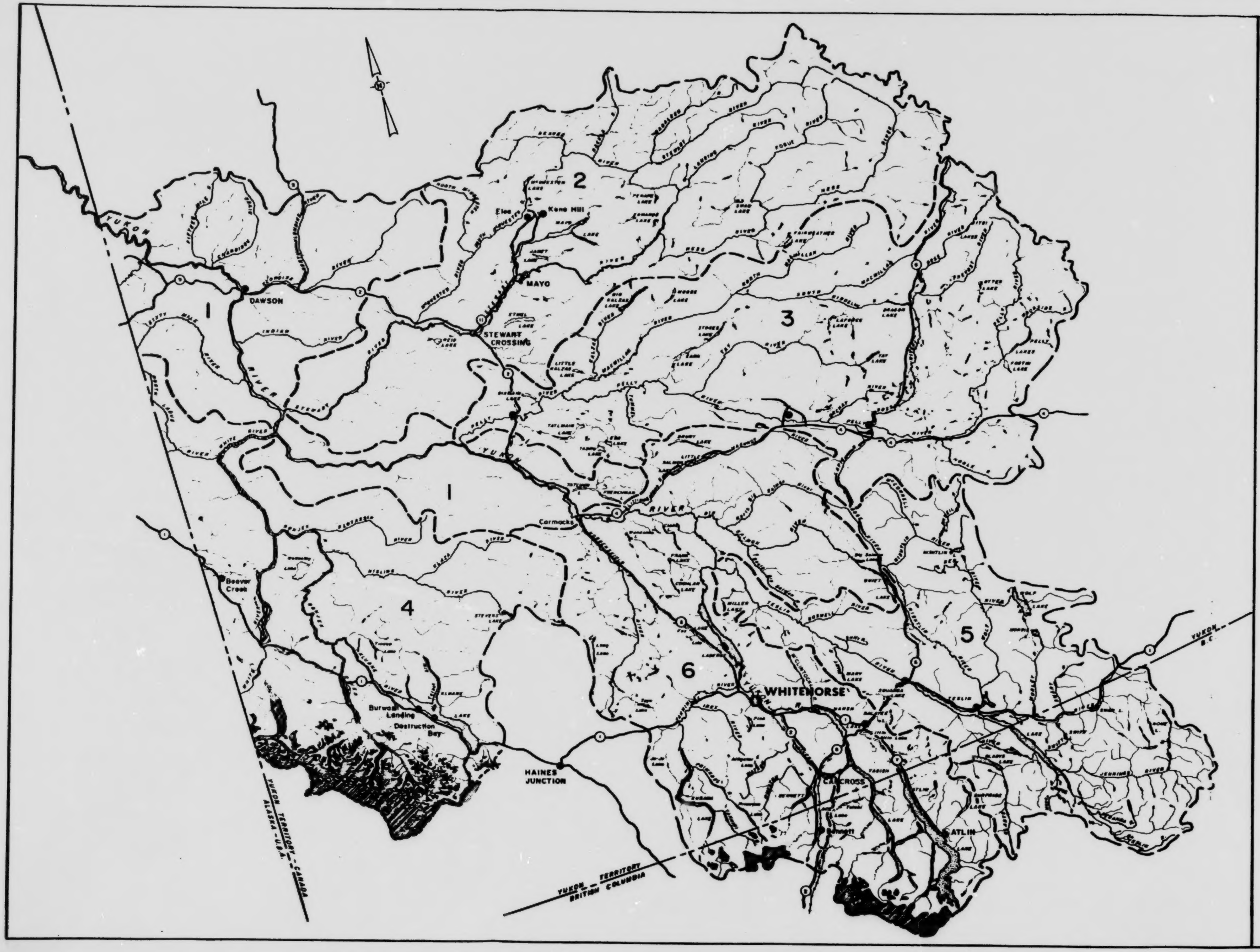
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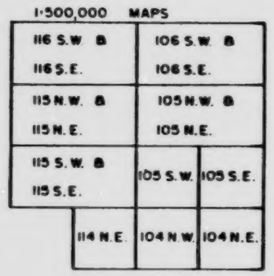
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MAP 1

YUKON RIVER BASIN IN CANADA

MAP SOURCE
YUKON RIVER BASIN COMMITTEE

SUB-BASINS

1 YUKON RIVER-LOWER
2 STEWART RIVER
3 PELLY RIVER
4 WHITE RIVER
5 TESLIN RIVER
6 YUKON RIVER-UPPER

TERMS OF REFERENCE, PROGRAM AND BUDGET

The initial Terms of Reference for the Tourism, Parks and Recreation Work Group included six objectives:

1) To describe the existing tourism, parks and recreation in the Basin.

2) To review, evaluate and synthesize recent and ongoing investigations concerning projected water resource use for parks and recreation. A specific task is to review the possibility of Heritage River status being assigned to the mainstream of the Yukon River and other sub-basin rivers.

3) To identify potential use conflicts and compatibilities related to tourism, parks and recreation that might arise as a result of water resource developments such as reservoirs, placer and other mining activities, and associated community growth. Specific scenarios for development will be identified by the Study Director.

4) To liaise with other work groups as required in evaluating the impacts of various water resource developments.

5) To assist the Socio-Economic Work Group in defining the socio-economic values of recreation.

6) To assist the Study Director in drafting appropriate management guidelines.

As the study progressed, some of the initial work group objectives were modified to reflect changes in the direction of the Yukon River Basin Study as a whole, and to better describe the information that was coming to light as part of the Tourism, Parks and Recreation Project. For example, objectives (3) and (5) were modified because the study of non-market values associated with tourism and recreation was not pursued, and the "scenario" approach was not well suited to tourism, parks and recreation. Potential Heritage River status for the Yukon River mainstem was treated as one component of a complex parks and recreation situation in the Basin, rather than being highlighted as a specific task.

The work group was initially assigned a limited budget of $46,000, and the decision was made to apply this budget to a project to gather and synthesize relevant data and information on tourism, parks and recreation in the Basin. The project was initiated in October of 1982, and Cathryn Paish was hired to carry out the descriptive synthesis.

At the request of the work group the committee allocated an additional $50,000 to the project to carry out a more detailed study of the recreational capability of lakes and rivers in the Basin. Two projects were completed using this additional funding:

1) Inventory, Analysis and Evaluation of the Recreational Capability of the Yukon River Basin by Reid Crowther and Partners; and
2) A detailed descriptive Appendix of lakes and rivers in the Basin by Howard Paish and Associates Ltd.

The detailed information presented in these projects was incorporated into the descriptive synthesis exercise.

The various components of tourism, parks and recreation in the Basin are managed by over a dozen government departments at Federal, Territorial, Provincial and Municipal levels. In addition, numerous private groups, agencies and international organizations have expressed interest and concern in tourism, parks and recreation in the Basin.

The goal of the Descriptive Synthesis project was to collect, review and synthesize available information, to identify data and information gaps, and to assist in formulating recommendations based on available and identified data deficiencies.

SUMMARY OF METHODOLOGY

The major task in this report was to collect, review and synthesize existing information on tourism, parks and recreation in the Basin. Data was collected from government agency files and libraries, and through correspondence and interviews with representatives from government and private agencies, groups, and individuals involved with tourism, parks and recreation. (See Bibliography I, II, III and IV.) More detailed information on lakes and rivers was compiled by Reid Crowther and Partners Ltd. and Howard Paish and Associates Ltd., and incorporated into the descriptive synthesis project.

An ongoing task was the preparation of a detailed map folio to illustrate the information presented in the main report. Data for the maps was collected from a wide variety of published and unpublished reports, file information, personal correspondence and interviews; and has been compiled and drafted onto a set of sub-basin maps. Detailed source information for each topic presented on the maps and cross references to relevant sections in the main report are included in the map folio.

A third task has been the preparation of an Appendix volume containing representative information from studies and reports which expands on the summarized and synthesized information presented in the main report.

A detailed, four part bibliography of literature, file information, and maps with their retrieval location, and a list of individuals and agency contacts has also been prepared.

CHAPTER ONE: TOURISM

The tourism industry in Yukon has experienced steady growth over the last twenty years, however, in 1982 closure of most of the Territory's hardrock mines elevated tourism to an unaccustomed role as the leading private sector industry in Yukon's economy. This trend is likely to continue as long as Yukon's hardrock mining sector remains at a virtual standstill. Government and private tourism-related agencies have responded to this trend, resulting in several federal/territorial cost-shared agreements aimed at developing tourism and related services and facilities and ongoing Territorial Government promotion of the importance of tourism and associated private sector businesses and enterprises.

Most current and potential tourism activity in the Yukon is associated with lakes, rivers, shorelands and major transportation routes within the Basin, and with related historic and cultural features. Of particular interest are the Yukon River and its major tributaries and the East Kluane area. Although there will be a continued emphasis on Yukon's history and major transportation routes, there is a growing interest among resident and non-resident tourists, tourism entrepreneurs and promoters, in wilderness/adventure travel in the Basin.

Yukon's wilderness resources, especially its rivers and lakes, are a vital and integral part of wilderness/adventure travel, however, these resources have not been fully assessed to determine their use capacity, quality and marketability and the complete variety of wilderness/adventure activities and opportunities available. In addition, these resources, for the most part, have not been fully analyzed with respect to their ability to support increased recreational use. (The potential of the wilderness/adventure travel industry and its relationship to wilderness resource is discussed in more detail in the Tourism Potential section.)

The Tourism section of this study is divided into 4 categories:

I) Visitor Characteristics and Trends.
II) The Tourism Industry.
III) Economic Value of Tourism.
IV) Tourism Potential.

The following table shows the sources of statistical and other information used in this section. The abbreviations following each source will be used in the text of this chapter.

1. Government of Yukon, Department of Tourism, Recreation and Culture, Tourism Planning and Development Branch.

    a) Northern Travel Survey, 1978 (N.T.S. 1979)
    b) Coupon Conversion Studies (C.C.S. 1981) (C.C.S. 1982).
    c) Visitor Reception Centre Statistics (Visitor Stats. 1983). Information collected from tourists who voluntarily registered at Centers, May to September, 1983.
    d) Yukon Statistical Analysis, (Inquiry Stats. 1983) September, March and February, 1983. Preliminary analysis of information collected from inquiry cards sent in by people requesting information on the Yukon.
    e) Yukon Tourism 1981, Industry Highlights (Highlights, 1981) Yukon Tourism 1982, Industry Highlights (Highlights, 1982).
    f) Yukon, You're More Than Welcome. 1983, Official Yukon Travel Guide, (Yukon Travel Guide, 1983).

2. Several internal Department of Tourism documents prepared for discussion of Canada Yukon Tourism Agreements, 1979, and 1983. Since these are internal and not public documents, they are not referenced within the text.

3. Thorne, Stevenson and Kellogg, 1982 (TSK, 1982)
Wilderness/Adventure Travel Industry.
Industry Overview and Development Strategy.
Prepared for Government of Yukon, Department of Tourism and Economic Development. Tourism Planning and Development Branch.
A Canada Yukon Tourism Agreement Project.

Details of the methodologies for collection and analysis of statistical information are described in these reports, or are available from the Tourism Branch statisticians and will be referenced but not duplicated in this study.

Detailed statistical and descriptive information on tourism in the B.C. portion of the Basin was not available at the time of writing. Statistics in the "Yellowhead 16 - Visitor '79" document do not distinguish the Atlin area from the region as a whole, and are therefore, not useful. Tourism in the Atlin region is more closely related to tourism in Yukon than in B.C. because most access to that area is from Yukon.

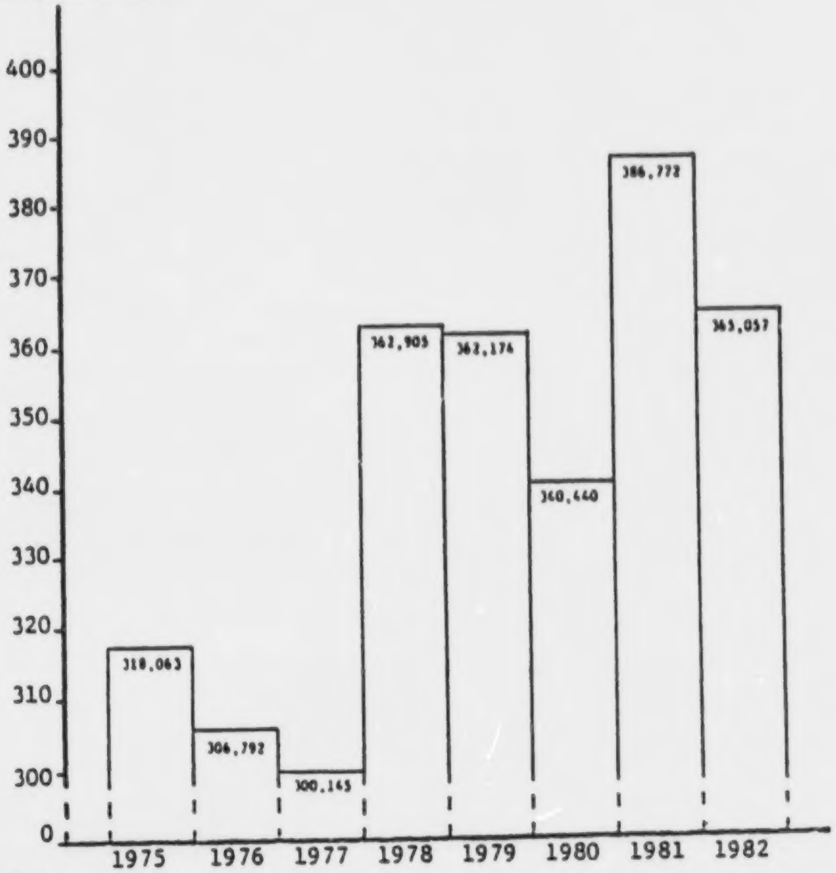
I) Visitor Characteristics and Trends

A. Visitor Volumes:

The number of visitors to the Yukon has increased steadily over the last twenty years, although this growth has been non-linear reflecting changing economic and social conditions. From 1972 to 1975 there was a 90% increase in total visitor volumes; an average of 10% per year. Chart 1 illustrates the more recent trend from 1975 to 1982, and although 1982 border crossings reflected a 6% decrease from 1981, it was still the second largest number of crossings ever recorded.

CHART #1

Number of visitors and returning Canadians entering Yukon, regardless of length of stay, annual totals & percent distribution by mode of transport, 1975-1982.



% by mode:

	1975	1976	1977	1978	1979	1980	1981	1982
Personal vehicle	64%	60%	56%	63%	59%	57%	59%	66%
Motorcoach	5%	5%	5%	4%	10%	11%	12%	11%
Highway Total	69%	65%	61%	67%	69%	68%	71%	77%
Air	19%	21%	23%	22%	22%	27%	24%	18%
Rail & other	12%	14%	16%	11%	9%	5%	5%	5%

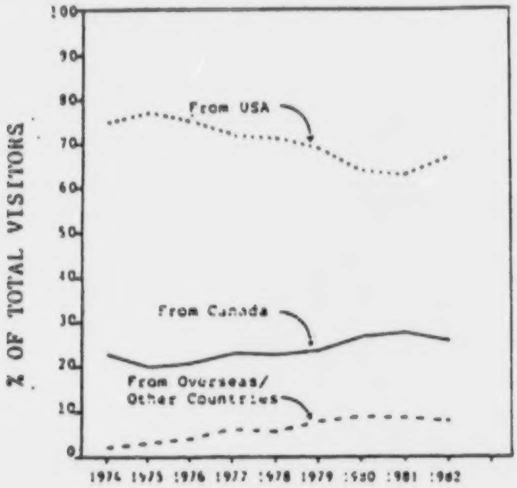
Source: Highlights, 1982.

B. Visitor Origins:

Chart 2 illustrates the trend of visitor origins. There has been a gradual decrease in the number of visitors from the U.S. and an increase in visitors from Canada and overseas, however, visitors from the U.S. account for 80% of personal vehicle traffic staying one night or more. Despite a slight increase in the percentage of U.S. visitors in 1982, the overall trend of increasing Canadian and especially overseas visitors is expected to continue.

Chart #2

Percentage of Yukon Visitors Originating From Each of Three Major Markets, 1974 to 1982.



Source: Highlights, 1982 (based on Tourism Yukon operating Visitor Information Centers from May through late September).

C. Travel Modes:

In 1982, highway travellers (bus and private vehicle) totaled 77% of all visitors, the highest such proportion ever recorded. Personal vehicles account for the majority of tourists: a trend which has been growing over the last three years (Chart 1). Until 1982, motorcoach travel has been increasing - a trend which is likely to continue. Air traffic has decreased drastically in response to the failing economy, and in 1982, rail traffic was also down. White Pass and Yukon Route railway closed in 1982, but figures are not yet available to show what effect the closure has had on tourism. However, preliminary information indicates a rise in one day tour bus traffic between Skagway and Carcross/Whitehorse.

D. Resident and Non-Resident Tourists:

Although border crossing figures show the total number of people traveling to and from the Territory, the vast majority of these travellers are tourists. Tourists can be divided into two categories: resident tourists which include Yukon residents travelling within the Territory and non-resident tourists which include other Canadians and foreign visitors.

Resident tourists travel over a longer season, taking more advantage of off-season recreational opportunities such as cross country skiing and ice-fishing. They tend to have a less visible impact on communities (with the possible exception of special events such as Rendezvous), and tend to recreate in a wide variety of areas. Indirect tourism-related expenditures for resident trips such as gas and groceries, make a significant contribution to Yukon's economy, and help raise the total impact of tourist spending to approximately $65 million.

Non-resident tourists tend to participate in more restricted activities such as visiting community attractions, river boat and canoe tours. Non-resident tourist activity is more influenced by tourism promotion and marketing and as a result they travel over a shorter summer season and concentrate in more restricted areas. Non-resident tourists make a more visible impact on communities, attractions and destination areas, but probably travel to or through the Yukon only once.

The following quote from the 1982 Tourism Highlights sumarizes the resident and non-resident tourism:

> "Yukon residents appear to account for about one third of these (trips) numerically though their trips were probably much shorter and had much less impact upon certain sectors of the industry, particularly the accommodation sector and distribution channels, since Yukoners often take day trips, use personal transportation, camp and visit with friends and relatives. However, their direct and indirect impact on the other four sectors is important (Table 6). Non-resident tourists account for the other two thirds of tourist related trips in Yukon and have far greater visible impact throughout the different sectors of the industry, due to their longer periods of stay and their dependence upon locally provided goods, services and facilities for many of their essentials..." (Highlights, 1982).

Table 1 shows the numerical breakdown of resident and non-resident travelers to and in Yukon.

Table 1: BREAKDOWN OF TRAVELERS TO AND IN YUKON

A.	Yukoners traveling within Yukon taking an average of about 5.5 trips each, account for 136,000 tourist trips:		136,000
B.	Visitors to Yukon (i.e., non-residents) spending one or more nights in Yukon during their entire trips, with double counting caused by entering Alaska and re-entering Yukon eliminated:		
	Mode of travel when departing from Yukon:		
	Auto:	99,000	
	Bus:	14,000	
	Air:	46,000	
	Rail:	41,000	
	Total non-resident visitors spending one night or more in Yukon:		200,000
C.	Visitors to Yukon (i.e., non-residents) spending less than one day in Yukon during their entire trip:		71,000
	Estimated total number of person trips into and within Yukon by Yukoners and visitors traveling for tourism related purposed regardless of duration of trip in Yukon:		407,000

Source: Highlights, 1982.

E. Seasonality:

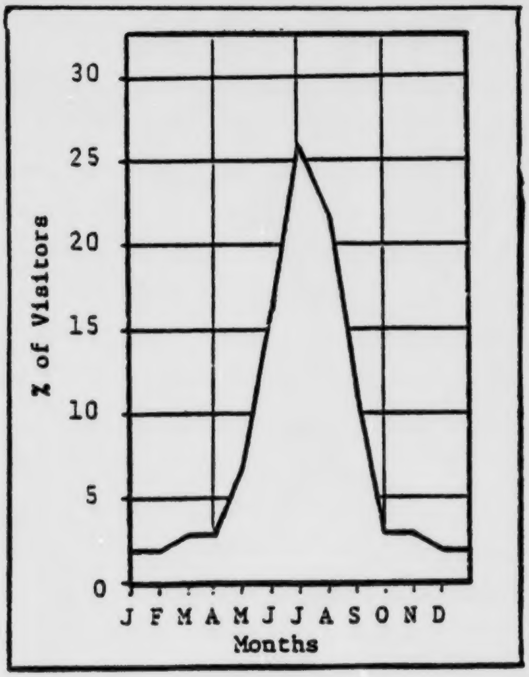
Chart 3 illustrates the highly seasonal nature of Yukon's tourism industry. Services and facilities strain to meet the demands of tourists during the summer months, and are virtually empty or shut down for the fall and winter. Tourist-related businesses work long hours, are able to employ seasonal workers and derive most of their income in the summer months from non-resident tourists, but many are sustained throughout the fall and winter by resident and business travelers. However, in some of the smaller communities - Dawson in particular - many services and facilities shut down completely. This can be a real headache for residents, who must compete with visitors during the summer, and then find themselves without many services and facilities for the rest of the year. Several projects have been implemented and/or are planned to help alleviate this problem by extending the tourist season and providing more off-season recreation opportunities for residents. The Whitehorse Ski Chalet (developed under the Canada Yukon Tourism Agreement) is one example of such a project.

F. Reason for Visit and Visitor Satisfaction:

Very little information is available on reasons for tourists visiting Yukon and on visitor satisfaction, and until very recently, there has been no systematic program to collect such information. The following discussion is based on limited surveys conducted as part of the 1978 Northern Travel Survey (which is currently being updated), 1981 and 1982 Coupon Conversion Studies and recent data collected by Tourism Yukon.

Chart 2 shows that most visitors to the Yukon are from the United States, and for most of these visitors, Alaska is still

Chart #3
Percentage Distribution of Visitors and Returning Canadians Entering Yukon, 1980



Source: Highlights, 1982.

Table #2
Purpose of Trip (%)

	Total			U.S. Residents			Cnd. Residents		
	1980	1981	1982	1980	1981	1982	1980	1981	1982
To visit Yukon	32	23	20	10	10	8	50	49	45
To visit Alaska	12	10	17	26	14	23	0	1	6
To visit Yukon and Alaska	56	67	63	64	76	69	50	50	49

Source: CCS, 1982

their primary destination. The 1978 Northern Travel Survey indicated that most visitors to Yukon planned on spending some time in Alaska, and 45% of those inventoried were just "passing through" Yukon. Most recent coupon conversion study statistics show that most visitors come to visit both Yukon and Alaska, but the majority of tourists - which are Americans - spend about twice as long in Alaska as in Yukon (Tables 2 and 3). The trend continues to be that of viewing Yukon as an area to be "passed through" on the way to destination areas in Alaska. This trend will probably continue even though the proportion of Canadian and overseas tourists is on the rise.

Table #3
Nights Spent in Yukon and Alaska

	1980	1981	1982
Nights in Yukon (average)			
Canadians	11.5	18	10.2
Americans	7.5	8	6.5
Nights in Alaska (average)			
Canadians	3	3	6.6
Americans	15	14	14.9
Total Trip			
Canadians	N/A	30	21.6
Americans	N/A	42	30.9
Total	34	38	28.0

Source: CCS, 1982.

The need for more specific destination features in Yukon to attract and hold tourists has been addressed in several of the reports and internal documents reviewed for this study and will be discussed in more detail later in this chapter.

Table 4 shows that potential tourists are interested in sightseeing, Gold Rush history, tours and trips within Yukon and wilderness-oriented activities such as naturalist trips, fishing, and camping. Table 5 which summarizes activities tourists actually participated in while in Yukon, reflects the interests indicated in Table 4, with the addition of the high degree of visitation to established attractions such as Dawson and Kluane Park.

Table 4 Interest Categories of Potential Yukon Tourists

	1982/83 Canada	1982/83 U.S.	1982/83 Overseas	1981/82 Canada	1981/82 U.S.
1. Auto/R.V.	70.5	65.3	40.8	64.0	62
2. Air	14.4	21.6	30.3	17.1	17
3. WP & YR	28.1	32.1	24.3	23.1	27
4. Ferry	25.9	32.4	17.8	23.7	27
5. Cruiseship	28.1	22.8	13.8	N/A	N/A
6. Fly/drive	18.8	20.1	23.7	20.8	16
7. Dempster	40.3	26.4	28.9	35.2	22
8. Tours within Yukon	47.2	46.1	49.3	43.6	36
9. Tours into Yukon	17.2	17.6	21.7	29.2	26
10. Accommodations	38.0	46.7	44.1	47.9	39
11. Campgrounds	57.6	51.2	33.6	51.2	48
12. Arts & Crafts	36.7	26.3	24.3	34.6	23
13. Fishing	44.1	43.8	29.6	38.3	42
14. Hunting	14.4	18.4	20.4	12.8	18
15. Sightseeing	71.9	61.7	53.3	N/A	N/A
16. One Day Trips	39.7	35.7	28.3	29.5	25
17. Naturalist Trips	33.8	29.0	38.2	34.1	27
18. Wilderness Trips	28.4	24.8	34.9	30.1	28
19. Winter/Skiing	8.0	9.0	11.8	21.6 - 9.2	8.9
20. Gold Rush	49.8	36.5	34.2	42.5	29.0
21. Conventions	4.5	5.9	6.6	4.9	5.0

Table 5 Activities Participated in While in Yukon

Sightseeing -100%
Fishing - 46%
Hiking/riding - 25%
Boating/canoeing - 25%

Visit Whitehorse - most
Visit historic sites - 88%
Visit Dawson - 64%
Visit Parks - 60%

Source: Inquiry Stats 1983

II) The Tourism Industry

A. Tourism Marketing:

The Wilderness/Adventure Travel Industry Study (TSK, 1982) and the Yukon Tourism Development Strategy discuss in more detail the roles that various agencies and organizations play in tourism, parks and recreation. The agencies that deal with tourism in particular and the various agreements and programs that involve tourism in the Basin, will be discussed in this chapter.

The Tourism Marketing and Tourism Planning and Developing Branches of the Department of Tourism, Recreation and Culture, Government of Yukon (Tourism Yukon); Tourism B.C., Parks Canada and a number of private agencies, organizations and businesses are involved in promoting tourism in the Basin.

A detailed description of recent Tourism Yukon promotion and marketing programs can be found in the "1982 Tourism Industry Highlights". They include:

- responding to inquiries and distribution of information packages and travel guides.
- attendance and/or presentations at various consumer travel shows.
- a variety of magazines and literature promotion advertising, including joint advertising campaigns with Alaska and C.P. Air.
- operation of the Yukon Cooperative Tourism Marketing Committee, which functions as a central marketing agency.

Private organizations and entrepreneurs work both independently and jointly with Tourism to promote their services.

Tourism B.C. promotes the Atlin area, however, Atlin is not considered a tourist destination area in itself because road and commercial air access is through Yukon. Therefore, most tourists visit Atlin as part of a Yukon trip, and information on the services and facilities in the Atlin area is included in Tourism Yukon's promotional literature.

B. Tourism Development Initiatives

Over the last three years several Federal/Territorial and Federal/Provincial Agreements have provided the necessary funding for studies and development projects related to tourism and recreation. These agreements include:

1. Canada-British Columbia Travel Industry Development Subsidiary Agreement (TIDSA). The Yellowhead 16 Tourism Region Study was completed under the TIDSA program and details of the Atlin region tourism development proposals are discussed in the tourism potential section of this study.

2. Tourism Small Business Incentives Program (TSBIP)

3. The Canada-Yukon Tourism Agreement (CYTA).

4. The Canada-Yukon Subsidiary Agreement on (CYSA) Renewable Resource Development.

TSBIP

The TSBIP was a $2.2 million Federal/Territorial program offering financial assistance to the private sector for creation, expansion or improvement of tourism attractions, accommodation and other service-oriented small businesses. The program was intended to help bridge the gap in tourism development programming that otherwise would have existed between CYTA which expired in 1983 and the implementation of a new Canada/Yukon Economic Development Agreement.

A summary of CYTA and CYSA projects relevant to tourism, parks and recreation is presented below. Details of individual projects are available in the annual reports for these agreements (see bibliography).

CYTA

The 3 year, $6 million Canada Yukon Tourism Agreement (CYTA) which ended on March 31, 1983 was aimed towards providing employment and stabilizing Yukon's economy through strengthening the tourism industry. The Agreement identified wilderness and historic themes as having significant potential for development and growth, but the majority of projects carried out under the Agreement dealt with solving a backlog of immediate, short term problems within the existing tourism plant, rather than concentrating on services and facilities which would complement future tourism development in the Territory. However, several destination planning studies were completed under CYTA. Proposals for a new agreement, which are also briefly discussed in the section on tourism potential, address the continued need for future tourism themes and long term planning to increase opportunities for tourism development in Yukon.

Specific development projects under CYTA include:

- Whitehorse Ski Chalet; a $1.2 construction project to provide local and tourist services and facilities, and to offer off-season tourism opportunities.

- Visitor information centres; construction of new centres in Watson Lake, Carcross and Dawson and renovation of the T.C. Richards Building, (Information Center) in Whitehorse.

- Tourism incentives programs; included a number of specific attractions, accommodations and development projects. Examples include; financial assistance for hotel room construction, historic facade renovations in Dawson, and incentives to several businesses including wilderness/adventure operators.

Research and Planning under CYTA included:
- A Wilderness Guides Training Study.
- Wilderness/Adventure Travel Industry Overview.
- Dawson and Kluane Tourism Development Plans.
- Coupon Conversion Studies.
- A Steam Train Feasibility Study.
- A subscription of Tourcan - a tourism management information system.
- Visitor exit survey.

CYSA

Program II, "Tourism and Recreation Facilities" of the CYSA provided funding for planning and construction of outdoor tourist and recreation facilities, especially the expansion and/or improvement of campground facilities along major roads. Specific projects included:

- site planning and construction of several new campgrounds (see Map Series A, Vol. II).
- ongoing provision of campground signs and kitchen shelters.

C. Tourism Plant Profile

Table 6 presents a profile of Yukon's tourism industry divided into six sectors which are discussed in detail in the Government of Yukon's annual Tourism Industry Highlights reports. For the purposes of this study, attractions and wilderness/adventure travel related to current and potential water based recreation and tourism will be expanded on.

1. Attractions

The need for more tourist attractions and preservation of those that do exist, historic sites in particular, is an important aspect of planning for development of tourism in the Basin. Available statistical information on man-made and wilderness-oriented attractions which are designated and actively promoted, illustrates the drawing power that such features have for tourists. For example, attendance figures at the Haines Junction visitor center had risen considerably since the addition of the Kluane Park audio-visual display in 1980. Although 1983 figures showed a marked decrease because a major bus tour company no longer includes the center in its tours, visitors to the Sheep Mountain facility had risen substantially. Chilkoot Trail use increased over 50% between 1977 and 1980. Whitehorse, a major destination and stopover for most Yukon tourists, offers a number of attractions including the MacBride Museum, Historic Sites walking tours, river boat tours, theatrical shows, a world class cross country ski course and services, equipment and guides for river travelers. The historic features in Dawson also attracted thousands of visitors each year.

However, the need for designated, destination features and necessary infrastructures, especially for the outdoor rec-

TABLE 6

PROFILE OF YUKON TOURISM INDUSTRY
SAMPLE LISTING OF FACILITIES & SERVICES BENEFITTING FROM TOURISM

		Approx. No.
TRANSPORTATION SECTOR	Air Carriers offering scheduled services:	3
	Air carriers offering charters but not scheduled service:	14
	Railway:	1
	Vehicle rental companies (cars/campers):	7
	Bus companies offering scheduled/charter services:	7
	Auto service stations:	50±
	Miscellaneous:	?
ACCOMMODATION SECTOR	Fixed roof accommodation establishments (hotels, motels, highway lodges):	79
	Commercially operated campgrounds: *	7+
	Government operated campgrounds: *	45±
	Miscellaneous:	?
FOOD & BEVERAGE SECTOR	Cafes, lounges & dining rooms associated with accommodation establishments:	118
	Cafes, restaurants & fast food outlets not associated with accommodation establishments:	28
	Government Liquor Stores/Commercial outlets:	58
	Grocery Stores:	20
	Miscellaneous:	?
EVENTS & ATTRACTIONS SECTOR	Events, including craft fairs, festivals, etc.:	34+
	Commercially operated attractions:*	10±
	Government operated attractions/ historic sites: *	11+
	Government operated visitor information/ interpretation centres: *	5
	Museums which charge admission: *	4+
	Boat tours: *	2+
	Yukon artists and producers of handicrafts selling directly and through fairs, stores and co-ops:	248+
	Miscellaneous:	?
RECREATION, ENTERTAINMENT & MISCELLANEOUS SERVICES	Sporting goods/recreational equipment stores:	15+
	Wilderness tour operators offering wilderness experience vacations, fishing lodge vacations, rentals of canoes, etc.:*	28+
	Big game outfitters: *	20
	Live theatres, movie cinemas, games centres, bowling alleys, arenas, etc.:	?
	Camera/film retailers, laundromats, drug stores, etc.:	?
	Miscellaneous:	?
DISTRIBUTION CHANNELS	Travel agencies:	6
	General tour operators/ground operators:	2+
	Visitor associations:	2+
	Miscellaneous:	?

(? = Unknown Number)
* - Considered in this study.

Source: Highlights, 1982

reation seeking tourist and resident in the Basin is an issue which must be addressed if wilderness tourists are to be convinced to stay longer in Yukon rather than pass through it. The opportunities do exist for such development. For example, Kluane Park has been recognized nationally and worldwide as an area of unique and exceptional wilderness value, but Haines Junction, with its proximity to the Park and a possible focal point for future park-related attractions, does not presently have a sophisticated infrastructure necessary to support possible development. It will also be important to carefully consider the needs of resident recreationists as well as tourists in the development of wilderness recreation. A 1977 study on residential recreation found very divergent opinions among Yukon residents as to whether recreation opportunities should be developed or left as they are - in an "untouched, uncontrolled" state (Burton, 1978). Outdoor recreation seeking tourists coming to the Yukon may have similar divergent opinions as to what constitutes as "wilderness experience". The opportunity for a complete range of wilderness recreation exists in the Basin at the present time, and tourist and recreation managers will have to plan very carefully in order to enhance wilderness attractions for the benefit of residents and tourists.

2. Wilderness/Adventure Travel

Wilderness and history are the two major themes which are promoted and attract most visitors to the Yukon. Although the focus of tourists coming to Yukon to experience Gold Rush history and to drive throughout a frontier region will continue to be prominent, growing interest in Yukon's pristine wilderness indicates that active wilderness travel has the most potential for growth.

In this section, the existing wilderness/adventure travel industry will be discussed. Its potential for growth will be discussed later in this chapter.

Table 7 shows wilderness tour operators currently or recently operating in Yukon, and the variety of services and facilities that they offer. (It should be noted that in the current economic recession, a number of operators may be temporarily closed or operating intermittently, but could return to full time operation in the future). Tour operators in the United States and Europe also offer Yukon wilderness vacations - using either their own guides or Yukon based guides. Table 7 shows that most operators offer water-based recreation as part or all of their program with the most popular activities being canoe trips and sport fishing (TSK, 1982).

Most of these businesses are new, small scale and have relatively low gross annual revenues ($10,000 - $15,000 a year). Visitors who come to take part in wilderness/adventure holidays appear to stay about 2 1/2 times longer than pass through travelers and spend more money on direct and related services and products.

The 1982 "Wilderness/Adventure Travel Study, An Industry Overview" divided the industry into four segments:

1) Guided wilderness experience tours.
2) Non-guided wilderness experience tours, including, canoe and equipment rentals.

3) Sport fishing from camps or lodges, catering primarily to non-resident visitors who come to the Yukon to fish.
4) Big game outfitting.

The study estimated that out of a total of 180-190,000 non-resident visitors to Yukon in 1980, about 35,000 participated in wilderness-oriented activites. Approximately 3,300 of these visitors purchased "packaged" wilderness tours from Yukon based operators. 1,100 took long term and day trips which involved some sort of guiding, and 1,200 took non-guided trips consisting mainly of canoe trips. An additional 405 were guided hunters and 570 enjoyed sport fishing at lodges or camps.

TABLE 7. Wilderness Adventure Travel Guides and Services
Yukon River Basin.

OPERATOR	FISHING	CANOEING	RIVER TRIPS & RAFTING	RIVER/LAKE BOAT TOURS	HIKING, BACKPACKING MOUNTAIN-EERING	WILDERNESS TRIPS AND SKILLS	TRAILRIDES	WINTER SPORTS: SKIING, ETC.	DOG SLEDDING	EMPHASIS	EQUIPMENT RENTAL	LOCATION
ECOSUMMER CANADA	X	X	X		X	X		X		Wilderness Skills		Kluane Pk. Firth, Alsek Tatshenshini
YUKON EXPEDITIONS		X			X							
WILDERNESS YUKON PHOTOGRAPHY TOURS				X			X			Photography		Pelly, Mac-Millan R's.
YUKON PIONEER WILDERNESS CAMP	X*	X			X	X						Stewart R.
TINA LAKE WILDERNESS RESORT	X				X		X					Tina L.
JOURNEYS NORTH		X			X			X	X			Haines Jct. Area
NORTH COUNTRY TRAVELLERS (JOHNSONS SLED DOGS)	X *	X			X	X		X	X			Atlin L.
NORTREKS		X	X		X	X		X				Atlin L.
WILD AND WOOLY		X			X	X		X	X			
YUKON WILDERNESS UNLIMITED/GENTLE ADVENTURES	X		X	X		X		X				
KLUANE ADVENTURES	X *				X			X			X	Kluane Pk. Haines Jct. Area.
YUKON MOUNTAIN AND RIVER EXPEDITIONS		X	X		X			X	X			
RAINBOW ADVENTURE TOURS LIMITED		X			X							Klondike-Dempster
BROOKLANDS WILDERNESS CAMP	X *			X							X	Tagish L.
KARPES & PUGH		X								Guided Canoe Trips		Several R's in Basin

Table 7 con't

OPERATOR	FISHING	CANOEING	RIVER TRIPS & RAFTING	RIVER/LAKE BOAT TOURS	HIKING, BACKPACKING MOUNTAIN-EERING	WILDERNESS TRIPS AND SKILLS	TRAILRIDES	WINTER SPORTS: SKIING, ETC.	DOG SLEDDING	EMPHASIS	EQUIPMENT RENTAL	LOCATION
B & J RIVER CAMP (1981)	X											
MORELY BAY FISHING	X											Teslin L.
YUKON TRAIL RIDING							X					Haines Jct.
GOLD RUSH RIVER TOURS			X	X							X	Wheaton & Yukon R's.
YUKON CANOE RENTALS			X	X							X	
ALKAN AIR										*Sightseeing*		*South Yukon*
CANADIAN NORDIC SKI HOLIDAYS								X	X			
COGHLAN LAKE	X			X			X	X	X			
GRIZZLY CREEK LODGE	X											Toobally L. & others
HYAK RIVER EXPEDITIONS			X									Firth R.
KLUANE WILDERNESS LODGE (& VILLAGE)	X											Wellesley L. etc. (see fishery sect)
LISTER MOTOR SPORTS											X	Whitehorse
SUNPATH EXPEDITIONS		X			X					Gold Rush Trail		
TIMBERLINE TOURS	X	X			X							
WOLF LAKE WILDERNESS CAMP	X											Wolf L.

Table 7 con't

OPERATOR	FISHING	CANOEING	RIVER TRIPS & RAFTING	RIVER/LAKE BOAT TOURS	HIKING BACKPACKING MOUNTAINEERING	WILDERNESS TRIPS AND SKILLS	TRAILRIDES	WINTER SPORTS: SKIING,ETC	DOG SLEDDING	EMPHASIS	EQUIPMENT RENTAL	LOCATION
YUKON FISHING SAFARIS	X											Tatshenshini & Yukon R's. Teslin R.
YUKON TRAIL RIDE AND WAGON TREK							X			Gold Rush Trails		Land Based trails
YUKON WILDERNESS TRAILS	X	X			X							Big Salmon, Teslin R's & others
TERI-TORI CAMPGROUND	X Fly-in arr.											
BLACK MIKES GOLD MINES LTD.										Gold Rush Museum etc.		
COTTONWOOD PARK	X -Guided & arranged											Kluane L. Area
KOIDERN RIVER FISHING LODGE	X									Lodge Complex		Alaska Hwy. North area-Koidern R.
B. SHAKER (1981)					X							Whitehorse
SHEBA HOLDINGS (1981)					X							Teslin
SYLVIA WILLIAMS (1981)					X							Whitehorse
MAJOR EVANS (1981)					X							Tagish Bridge
NORTHERN WILDERNESS TRAVEL (1981)	X		X									Whitehorse
YUKON HOSTELLING ASSOCIATION (1981)			X		X							Whitehorse
YUKON WHITEWATER RECREATION (1981)											Canoe	
KLUANE LAKE CRUISES			X									Destruction Bay,Kluane L.
LAKEVIEW RESORT AND MARINA											X	Whitehorse Area
ADVENTURE YUKON											Canoe & Boat	Whitehorse Area

III) The Economic Value of Tourism

In the last several years, despite generally worsening economic conditions in Yukon, the tourism industry has remained reasonably healthy, experiencing only a slight decrease in visitor volumes in 1982 from the peak year of 1981. In fact, since the substantial decrease in Yukon's hardrock mines in 1982, tourism has become the leading private sector industry of Yukon's economy.

Yukon's tourism industry has made a positive contribution to the Canadian balance of payments and western Canadian regional economics, and is one of the few regions which experiences a substantial trade surplus in travel accounts in Canada. In terms of Yukon population versus Yukon's annual volume of visitors, 11 non-Yukoners take a relatively expensive trip involving Yukon, for each Yukon resident. The growing importance of tourism to Yukon's economy has enhanced both government and private interest and support. Examples of this support include:

- an increase in Tourism Yukon's marketing budget from $200,000 to $1,000,000 in the last five years.
- $1.1 million incentive funding from CYTA which has stimulated related private sector investments to represent a total investment of over $3.4 million in tourism related services and facilities.
- the $2.2 million Tourism and Small Business Incentives Program which provided financial incentives to private sector entrepreneurs who wished to improve or develop tourism related businesses.

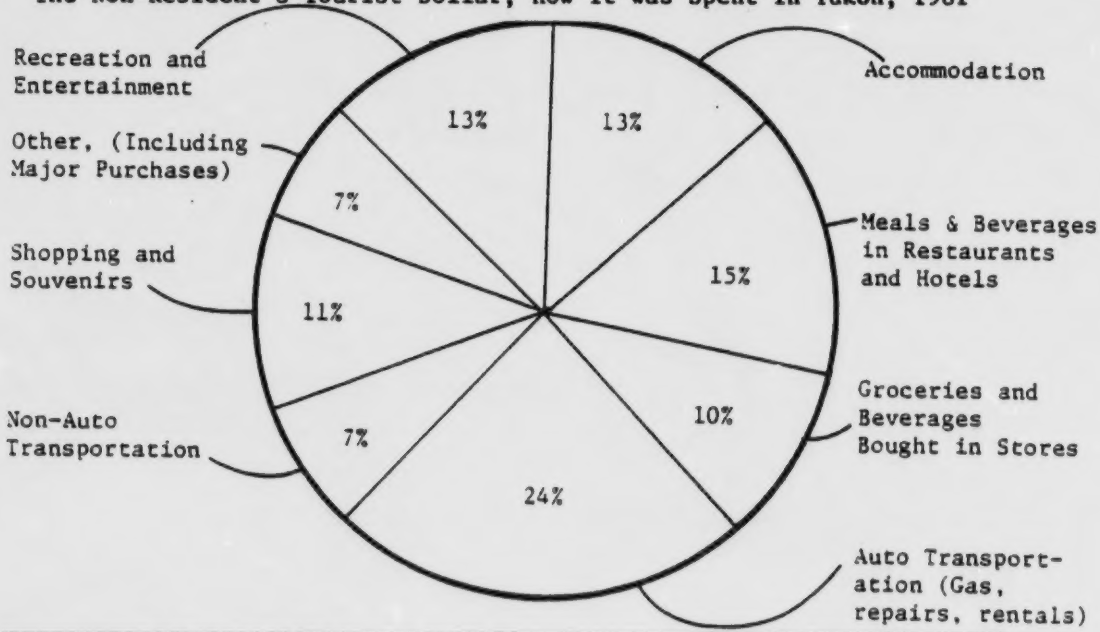
Tourism expenditures for 1982 were estimated to be the same as 1981 figures since no new data was available. Using 1981 data, estimated direct tourist expenditures in 1982 were $51 million. Resident tourist expenditures accounted for $3 to $4 million of this total and non-resident expenditures accounted for the remainder.

To account for indirect expenditures, a conservative multiplier of 1.276 suggested by the Yukon Economic Simulations model, brought the 1982 total to $65 million.

Until 1982, tourism was Yukon's third largest employer, after government and mining, and second largest private sector employer. 1982-83 statistics are not available yet to determine its current employer-standing, however, since the closure of hardrock mining in Yukon, it is likely that in 1982/83, tourism related businesses were Yukon's largest private sector employers. In 1982, at least 500 private and public businesses derived major to significant portions of their revenue from direct tourist expenditures.

Thorne, Stevenson and Kellogg estimated that the wilderness/adventure industry, including guiding, hunting and fishing camps and lodges and guided and non-guided wilderness experience businesses earned an estimated $5.6 - 5.95 million in 1981.

Chart #4
The Non-Resident's Tourist Dollar, How it was Spent in Yukon, 1981



Source: Highlights, 1982

IV) Tourism Potential

The number of tourists in Yukon since 1969 has almost tripled from 187,262 in 1969 to 365,057 in 1982. Tourism Canada has predicted a moderate growth rate for Canadian tourism for 1983-1987, approximately equal to that of the last five years. Further growth of Yukon's tourism industry will depend on long range planning today to react to and accommodate predicted and potential changes in tourist trends. These changing trends will require unique approaches to development, management and promotion techniques from both government and private agencies. Within the Basin area, as with the total industry, wilderness/adventure travel will be one important element with growth potential and will require a unique and well planned approach to development.

A. Summary of Potential and Predicted Tourism Trends

1. Importance of Tourism to Yukon's Economy

As discussed in previous sections, tourism is currently a leading sector in Yukon's economy and will probably continue as such in the near future. Government and private interest in tourism is reflected in the increasing investments being made in the industry, which will hopefully strengthen and diversify tourism so that it can continue as a strong industry when hardrock mining is reestablished. The establishment of tourism as an economically important resource user in the Territory could be one factor in leading to the increased recognition of "wilderness resources". The requirement that some areas within the Basin be specifically designated for recreational and tourism use and/or preservation and conservation should also be recognized as the tourism industry continues to strengthen.

2. Wilderness/Adventure Travel - Potential for Growth

Tourists coming to experience Yukon's history and to sightsee will continue to be prominent within the tourism industry for some time. However, there is significant potential for growth in wilderness/adventure travel activities. Growth in this sector is dependent on the perceived availability of quality wilderness resources in Yukon - a topic which has been discussed in detail in the 1981 "Wilderness/Adventure Travel Industry" Overview Study, and elsewhere in this report.

Designated protection and/or conservation and controlled development of important wilderness recreation resources will be necessary for wilderness/adventure travel to adapt to changing trends and be competitive in a world market.

3. Changing Tourist Origins

Although American tourists currently account for more visitors than overseas and Canadian tourists combined, the Pacific Rim and Europe are probably the main areas of untapped market potential, especially for wilderness travel. Tourism in Yukon is currently heavily dependent on the American tourist and therefore, the American economy. There is a need to increase the tourist market base to reach other world economies. Existing market strategies will be strengthened and further developed to attract these international markets.

4. Changes in Travel Mode

The major predicted change in Canadian and American markets is expected to be a shift from single vehicle to mass modes of highway expected to be shift from single vehicle to mass modes of highway travel, although recreational vehicles and camping will continue to be important. As the shift occurs from single vehicle to mass mode transportation, government and industry must be in a position to react to this changing trend and provide facilities and services to accommodate increased mass mode travel. This should also take place in the framework of particular themes for destination area development. Through the Canada/Yukon Tourism Agreement, planning exercises, and proposals for new agreements, government has recognized the need for strategies to reflect this change.

5. Trend Towards Specialized and Destination Vacations

In response to the rising cost of highway travel, especially in the north, there appears to be a shift away from general touring vacations towards destination area and specialized vacations. The past trend has been for many tourists to view Yukon as a pass through on their way to destinations in Alaska. Several studies and papers have identified the lack of major destination areas in Yukon as a problem for tourists and as a shortcoming for providing recreational opportunities to Yukon residents. Current approaches such as those taken for new agreements, stress the need to develop comprehensive destination areas, attractions, services and facilities in order to attract and hold tourist longer in Yukon.

6. Shoulder and Off-Season Tourism Opportunities

Although tourism will continue to be mainly seasonal, efforts are being made to promote and market shoulder and off-season tourism. For example, more marketing of winter recreation holidays and events, construction of the Whitehorse Ski Chalet, and promotion of off-season use of tourist facilities by Yukon residents at facilities like Dezadeash Lodge.

7. Increased Recreational Use of Yukon by Residents

In his 1977 study, Burton identified Yukon residents as being more actively involved in outdoor recreation than Canadians as a whole, a trend which appears to be continuing. However, since there have been no recent comprehensive resident user demand studies conducted in Yukon, it is difficult to determine what the actual demand is, or will be. The divergence in opinion as to whether opportunities should be developed or left in an undeveloped state, will probably always be an ongoing management issue. Until information linking resource data with user data is available and analyzed, planning for future resident, and to some degree, tourist recreation requirements will probably continue on a subjective, ad hoc basis.

8. Potential for Wilderness/Adventure Travel

The potential for wilderness/adventure travel in the Yukon has been looked at in some detail in the Thorne, Stevenson and Kellogg report "Wilderness/Adventure Travel Industry", (Overview 1982). As the guide outfitting and commercial sport fishing business will be discussed in the recreation chapter of this report, this section will deal with other guided and non-guided, water based wilderness recreation.

The wilderness travel industry sector within tourism is relatively new, and growth patterns have been even more volatile and sensitive to changing economic conditions than other sectors. The TSK report did not predict drastic increases in the total visitor volumes to Yukon for the next few years, however, the study predicts that growth in the wilderness tour business will probably be faster than overall tourism growth. The increasing interest in river rafting and canoeing is of particular importance to tourism planners and entrepreneurs in the Basin.

Despite optimistic predictions for growth in the North American wilderness travel market, Yukon promoters face several major obstacles:

a) Remoteness and expense of getting to Yukon
b) Growing world wide competition for similar markets.
c) Potential deterioration of Yukon's wilderness resources and increasing competition within the Basin for water use.
d) The need for increased high quality marketing.

Table 8 shows TSK's estimated growths for guided and non-guided wilderness travel in Yukon, based on an average annual growth rate of 6% to 8%. In the Basin, most of this growth potential will be in water related recreation especially river canoeing and rafting.

Several recommendations resulting from the TSK study stress the promotion and development of water related recreation, (Appendix I). The "long-term holiday" strategy recommends developing tours which emphasize wilderness skills including backpacking, hiking and river related travel; canoeing in particular. Another suggested strategy recommends the development of river-related facilitation packages such as high quality equipment rentals for canoe trips.

The TSK report and its recommendations point out the growing concern for the protection of Yukon's wilderness features and the

Table 8 ESTIMATE OF POTENTIAL GROWTH IN THE NUMBER OF TOURISTS PURCHASING WILDERNESS TRAVEL TOURS TO YUKON 1980 - 2000

Year	Long Term Guided Tours	Short Term Guided Tours	Non-Guided Tours	Total
		LOW		
1980	900	400	1250	2550
1985	1250	600	1800	3650
1990	1775	875	2950	5600
1995	2250	1150	4350	7750
2000	2500	1275	5050	8825
		PROBABLE		
1980	900	400	1250	2550
1985	1375	650	2250	4275
1990	2675	1250	5050	8975
1995	4300	1825	8500	14625
2000	4975	2100	10350	17425
		HIGH		
1980	900	400	1250	2550
1985	1575	700	2400	4675
1990	3700	1650	6000	11350
1995	6525	2900	11025	20450
2000	7950	3525	14075	25550

Source: TSK, 1982

preservation of quality at a level required to promote it competitively in world wide markets, as well as its value to resident recreationists. Although there is considerable inventory information on Yukon's wilderness features, the information for the most part, has not been analyzed with respect to user demand and carrying capacity, in particular its ability to support increased wilderness-oriented recreation and tourism. The TSK study and other studies reviewed, recommend that such an analysis is of the highest priority, especially with respect to potentially conflicting interests expressed by other water users such as hydro and mineral extraction.

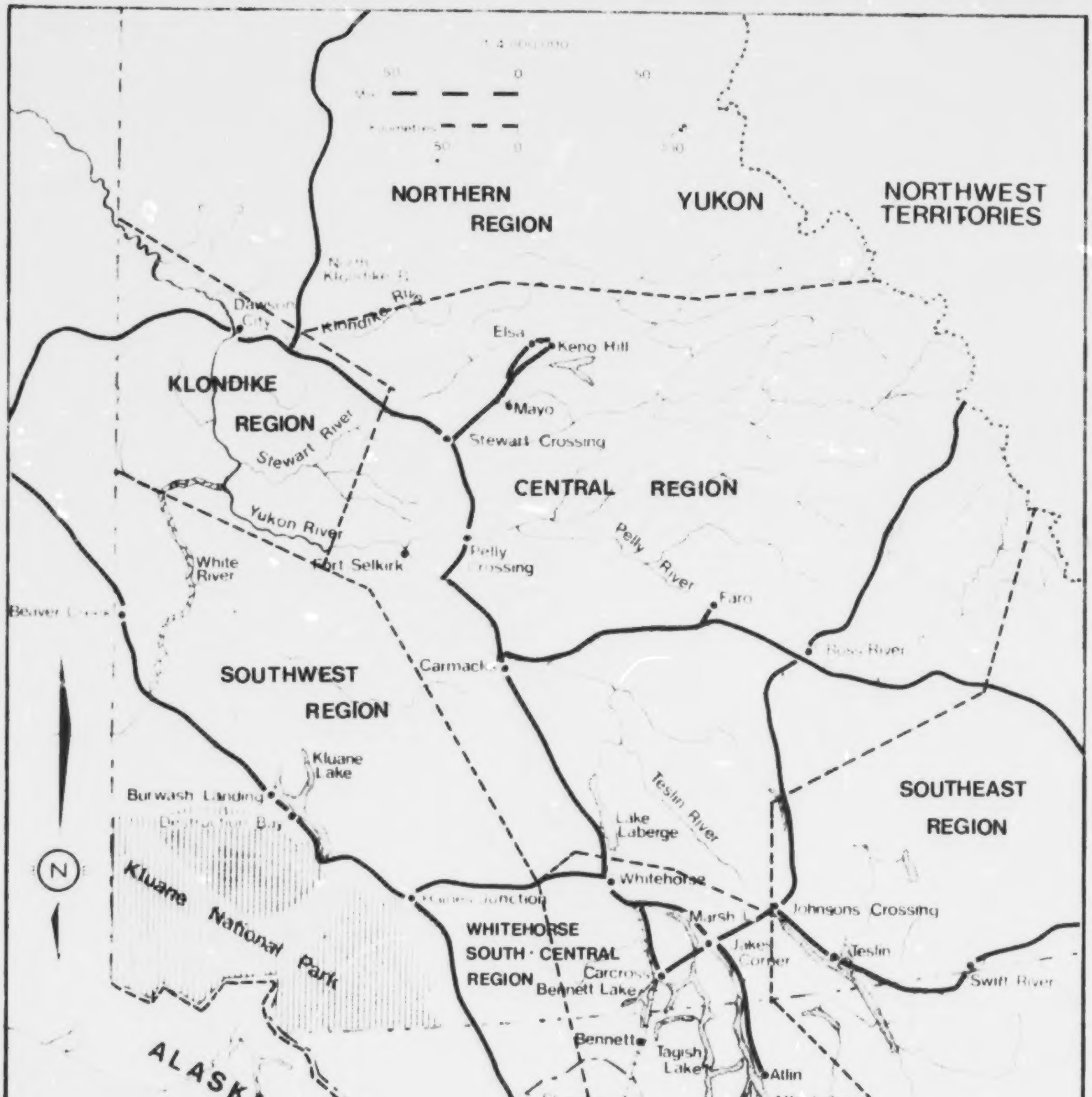
B. Tourism Regions

A working system of tourism regions and priority destinations areas linked by major transportation routes is used by the Tourism Planning and Development Branch for tourism planning purposes (Map 2) and are summarized below:

1. Southeast Region

Although the region is mostly out of the Basin, it does include Teslin, Wolf and Quiet lakes and portions of the Alaska and Robert Campbell Highways. Most potential tourism activity could originate from Watson Lake, including wilderness trips into the Basin. The possibility of road access into the Nahanni area could increase the regions recreational and tourism potential.

YUKON RIVER BASIN IN CANADA


50
0
50
Miles
Kilometres
50
0
50
NORTHERN REGION
YUKON
NORTHWEST TERRITORIES
North Klondike R.
Klondike River
Dawson City
Elsa
Keno Hill
KLONDIKE REGION
Mayo
Stewart River
Stewart Crossing
CENTRAL REGION
Yukon River
Pelly Crossing
Pelly River
White River
Fort Selkirk
Faro
Beaver Creek
Ross River
Carmacks
SOUTHWEST REGION
Kluane Lake
Burwash Landing
Destruction Bay
Teslin River
Lake Laberge
SOUTHEAST REGION
N
Kluane National Park
Whitehorse
Haines Junction
Marsh L.
Johnsons Crossing
WHITEHORSE SOUTH · CENTRAL REGION
Jakes Corner
Teslin
Carcross
Bennett Lake
Swift River
ALASKA
Bennett
Tagish Lake
Atlin
Skagway
Atlin Lake
Haines
Atlin Provincial Park
BRITISH COLUMBIA
LEGEND:
YUKON RIVER BASIN
PARK AREAS
MAJOR ROADWAYS
tcrodger83

Map:2

Tourism Regions

Map Source Yukon River Basin Study 1983
Information Source : YTG Dept. of Tourism
Recreation & Culture, 1983

2. South Central Region

The region is entirely within the Basin and includes two important priority destination areas.

The Whitehorse area bounded by the city limits, has been studied in detail in the Whitehorse Tourism Development Plan which includes items such as downtown revitalization and enhancement of historic features which would be geared towards creating a destination area.

The Southern Lakes area is the most used and has the most potential for water based recreation in the Basin. The area also provides accessible recreation opportunities for residents of Whitehorse and several smaller communities, including Atlin. Of particular interest are the heritage and water recreation features associated with Atlin (discussed in more detail in the B.C. Government's Yellowhead 16 Tourism Development Plan) and Carcross. Carcross lacks many services necessary to maintain the increased tourism which has resulted from greater highway traffic since the closure of the railway. The Southern Lakes region provides access to destination points in Southern Alaska as well.

3. Southwest Region

The region includes the Kluane priority destination area which has been discussed in detail in the Kluane Region Tourism Development Plan. Kluane National Park and land and water based recreation in the Kathleen, Mush-Bates and Dezadeash lakes areas are the main attractions, although the lakes are not in the Basin. Development of historic resources in Dalton Post and Silver City are other potential attractions.

4. Central Region

Although most of the region is not served by major roads, the Robert Campbell, North Canol and Klondike highways cross the southwest portion of the region.

Several rivers, the Pelly and MacMillan in particular, have recreation potential and some lakes have fly-in fishing potential. There are no plans for tourism development by the Tourism Branch in this region in the immediate future, however, preliminary planning exercises may be done in 1984.

5. The Klondike Region

The region includes the Dawson area, which has traditionally been the sole destination area in Yukon, and is also a popular termination point for Yukon River travellers. The Dempster Highway north to Inuvik is accessed from the Klondike Highway near Dawson, and Alaska is accessed through this region in the summer via the "Top of the World" Highway. A Tourism Development Plan for Dawson City has been prepared but will not be available for distribution until mid 1984. Management recommendations for the Dempster Highway were released in 1983.

Most recreation activity in the region centres around land-based historic features, especially in Dawson City and the Klondike gold fields. Development of these features involves cooperative planning and management between Parks Canada, Government of Yukon, and Klondike Visitors Association and the City of Dawson, with the two governments taking the lead role. A recent proposal by an independent entrepreneur to operate a tourist river boat between Dawson City and Eagle, Alaska (Yukon News, January 16, 1984) may attract more Yukon River travelers to the region in the future.

6. Atlin Area (Tourism, B.C.)

This region covers the B.C. portion of the Basin, including Atlin, Teslin, Surprise and Gladys lakes. Although the region is within B.C., road access is from Yukon, and therefore, most visitors come via the South Central Region. Atlin, Teslin and several other lakes are popular recreation lakes, and the region provides access to Atlin Wilderness Park.

A preliminary tourism plan has been prepared for the region, as part of the overall plan for the Yellowhead 16 Region. It is discussed in more detail in the following section.

C. Tourism Development Plans (TDP's)

Appendix II includes more detailed summaries and/or recommendations from each of the TDP's for Dawson, Whitehorse, Kluane and Atlin areas (Map E, Vol. II). Some highlights are included here.

1. Atlin

A tourism plan for the Atlin area is part of a regional tourism plan for the Yellowhead 16 Region in B.C. The purpose of the plan is to examine and assess tourism opportunities in the region, and to outline development opportunities that could be undertaken by public agencies and through the private sector. The opportunities outlined in the plan include:

- the development and promotion of Atlin as the key local service center for the area, and to take advantage of its high visible historic resources.

- limited development of services and facilities in, and catering to Atlin Wilderness Park.

- development of several "tour loops" involving roads, trails, boat/ferry trips and the White Pass and Yukon Route railway, if possible.

- development of Bennett to complement the Chilkoot Trail hike and the W.P.Y.R. railway.

Since tourism in the Atlin region is closely associated with tourism in Yukon's Southern Lake Region, Tourism Yukon has considered including the linkages between the two areas in its development plan for the South Central Region.

2. Dawson

The Dawson Plan, which is local, rather than regional in scope, emphasizes the Gold Rush theme, but includes natural, cultural and other historic resources as well. Highlights of the plan include:

- development of tourism and related services and facilities in Dawson and the nearby gold fields.

- stressing authenticity and attention to historic detail.

- components to complement and enhance resident lifestyles.

- components to extend the tourist season into spring and fall.

- encouraging local employment and public participation and involvement.

3. Whitehorse

The purpose of the Whitehorse plan is to provide a plan to change Whitehorse from a tourist service center to a tourist destination. At the present time, Whitehorse caters primarily to tourists passing through to other destinations and has a variety of services and attractions to offer short term visitors. However, more are needed to encourage visitors to stay longer. The Whitehorse plan includes recommendations for downtown revitalization and beautification, more enhancement and development of historic features and development of the waterfront area, all leading to more theme-oriented attractions.

The Whitehorse plan has been released to the public and is currently undergoing review by the City Council, other agencies and the public.

4. Kluane

The Kluane Region TDP was released for public review in the fall of 1983. Major recommendations include development of the Dalton Trail as an International Historic Trail (Map Series C, Vol. II), and restoration and stabilization of Dalton Post and Silver City for tourist attractions.

The plan emphasizes the importance of wilderness/adventure travel in the region, and recommended promotion of the area as the "Land of Outdoor Adventure". Haines Junction is suggested as the main service centre, with other gateway communities being Champagne and Beaver Creek. The plan emphasizes the existing and potential economic importance of tourism to the region.

A considerable amount of other resource, recreation and tourism related information is available on this region including: the TDP, an unreleased Regional Land Use Plan, inventory studies, cottaging surveys, wildlife studies, and resource studies associated with Kluane Park.

5. Southern Lakes and Watson Lake

Tourism planning studies for these areas are currently underway, with the data gathering stage near completion. Draft reports for public discussion may be prepared in the spring of 1984, with final drafts ready in the winter of 1984.

CHAPTER TWO: PARKS

The establishment and management of parks and conservation areas within the Yukon River Basin is divided between Federal, Territorial and Provincial jurisdictions. In addition, numerous and private groups and agencies have expressed interest in parks and conservation areas.

Parks Canada is responsible for the management of Kluane National Park and several historic sites and features in Dawson and Whitehorse. Although several new areas of potential Parks Canada interest have been identified in the Basin, with the exception of the Chilkoot Trail, none are being actively pursued at the present time.

The Province of B.C. has the mandate for establishing parks and several types of conservation areas in the province, and policies are in place for achieving these mandates. Atlin Wilderness Park and Charlie Cole Creek Ecological Reserve are within the Basin, and several other areas have been identified for future consideration for some sort of protective status. B.C. does not have any immediate plans for additional park development in the Basin.

The Yukon Parks Act, which was passed in 1979, provided the Government of Yukon with a mandate to establish a comprehensive park system in the Territory. Although parks planning is being pursued according to the guidelines described in the Act, a formal, comprehensive policy for achieving this mandate has yet to be adopted. In addition, land for the purposes of Territorial Parks must still be acquired from the Federal Government.

In 1980, a preliminary Parks System Planning proposal was prepared, which proposed "A system of territorial parks (which would) be based on representativeness of natural regions, natural history themes, and unique features to ensure a thorough representation of our heritage ... carried out systematically to meet identified needs and demands for recreation and conservation". (Government of Yukon, Department of Renewable Resources, 1980). Although not adopted as a policy, the proposal suggests a system of parks planning and management for the Territory, which is summarized in Table 9.

Parks designation is not the only method for recognizing and protecting valuable recreation and conservation areas in the Basin. Numerous private, public and government groups have identified existing and potentially important areas, and suggested ways by which these areas could be protected and/or managed. Discussions are ongoing between the Federal and Territorial governments addressing this issue.

The Yukon is one of the few remaining areas in Canada with the opportunity to develop a model system for parks, recreation and conservation area management through orderly planning, without the problem of integrating many previous unplanned developments. The experiences and problems of other provinces and the Federal Government could be used to develop a system representative of the north, which caters to northern use and demand. However, water related developments which could potentially conflict with recreation, tourism and conservation are being actively pursued, therefore parks and conservation area planning is essential in the near future to ensure the continued recreational use and enjoyment of water resources.

This chapter begins with a discussion of existing designated parks, historic sites and other features managed by federal, territorial and provincial agencies. Areas within the Basin which have been identified by government and private agencies as having parks, recreation and tourism potential are discussed, and the chapter concludes with a description of areas which have been studied in detail in various government and private reports.

TABLE 9: SUMMARY OF OBJECTIVES, REPRESENTATION, EVALUATION FOR VARIOUS PARK CLASSES

PARK CLASS	OBJECTIVES ADDRESSED*	REPRESENTATION	EVALUATION
Wilderness Preserve	Conservation Recreation Heritage Appreciation	Established in conjunction with Nature Preserves & Natural Environment Parks to provide representation of Natural Regions. The number and quality of Natural History Themes (N.H.T.) representation.	Based on: Quality of the natural landscape diversity of Natural History Themes and thence its ability to represent Natural Themes. Ability to meet low intensity recreation. Economic potential of alternate land uses.
Nature Preserve	Conservation Heritage Appreciation	Established in conjunction with Wilderness Preserves and Natural Environment Parks to provide representation of Natural Regions (N.R.). Will represent unique and representative examples of various N.H.T.'s identified for the territory.	Based on: Quality and integrity of the natural features and the ability to represent specific N.H.T.'s "Naturalness" of the feature and potential for deterioration or threat to the site. Economic potential of alternate land uses will be considered.
Natural Environment Park	Conservation Recreation Heritage Appreciation Tourism	Established in conjunction with Wilderness Preserves and Nature Preserves to provide representation of Natural Regions. Will represent a diverse range of natural environments and features. Will represent a large portion of the natural history and historical themes identified for Yukon.	Based on: Quality of natural landscapes and adequacy of N.R. representation. Quality of natural and historic features and adequacy of theme representation. Ability to provide low-intensity recreation economic potential of alternate land uses.
Parkway	Conservation Recreation Heritage Appreciation Tourism	Established to represent particular unique features or particular historical or natural history themes. Will be established along significant historic or recreational travel routes. Because of the linear nature of travel routes, natural region representation will not be a factor.	Based on: Quality and integrity of the natural landscape whether based on natural history features, historic themes or recreational criteria. Historical theme components and their significance Potential for providing low and high intensity recreation.
Historic Park	Conservation Heritage Appreciation	Established in conjunction with other classes, to represent each historical theme that can be represented by "in site" resources. Natural region or geographical area will not be a factor.	Based on: Quality and integrity of the resource and its suitability for park purposes. Suitabilit based on consideration of: accessibility, land base capability, historical features and significance, representativeness, recreational potentiaT scenic value.
Recreation Park	Recreation Heritage Appreciation Tourism	Established to meet resident and tourism demands for over-night and destination recreation areas. Established to incorporate historical and natural heitory theme components.	Based on: Ability to provide adequate day-use opportunities to population centres. Quality of day-use/camping opportunities. Level of supply currently available in an area whether public or private.

* Other objectives may be served but are not the reason for establishing such a park class.

Source: Government of Yukon, Dept. of Renewable Resources, 1981. Park System Planning. A Policy Proposal.

I) Existing Parks

"Existing Parks" refers to natural areas and historic sites which have some sort of designated protective status. Recreation parks (campgrounds) are discussed in the Recreation chapter of this report. Table 10 and Map Series B (Vol. II) illustrates the sites and features which have designated status, and the government agency responsible for their administration.

Table 10 **Existing Parks, Sanctuaries and Reserves in the Basin**

A.	Parks Canada	
	a) S.S. Klondike - Whitehorse	National Historic Sites
	b) Klondike National Historic Sites - Dawson	
	c) Chilkoot Trail - Yukon Section	
	d) Kluane National Park	
B.	Government of Yukon	
	a) S.S. Tutshi - Carcross	
	b) Several historic buildings - Whitehorse	Territorial Historic Sites
	c) Several historic sites - Dawson	
	d) Miles Canyon	
	e) Kluane Game Sanctuary	
	f) McArthur Game Sanctuary	
	g) Several isolated lots at Fort Selkirk	
C.	Province of B.C.	
	a) Chilkoot Trail - B.C. Section	
	b) Atlin Provincial Park	
	c) Charlie Cole Creek - Ecological Reserve #102	

A. Government of Canada

Parks Canada is responsible for the management and development of the S.S. Klondike in Whitehorse, the Klondike National Historic Sites in Dawson, and Kluane National Park.

The S.S. Klondike which has been completely restored and includes a newly constructed interpretive centre, attracted over 40,000 visitors in 1982.

The following excerpt from a letter written by the Project Manager for the Klondike National Historic Sites in Dawson, summarize and planed developments for that area.

> "We have approximately 70 structures, in our Klondike National Historic Sites jurisdiction, principally in Dawson City and Bear Creek, but including 2 dredges out in the goldfields. The majority of these structures have historical relevance to our commemorative objectives however not all have been identified as of national historic significance by the Historic Sites and Monuments Board of Canada. This provides us with some limited flexibility in terms of developmental options. Currently Historic Sites which are open to the visiting public, include:
>
> 1. Palace Theatre
> 2. S.S. Keno
> 3. Old Post Office
> 4. Harrington's Store
> 5. Robert Service Cabin
> 6. Gold Dredge #4
>
> In addition, a number of structures have been restored or stabilized and the interior adapted to contemporary use such as staff housing, office space or commercial outlets. These include:

> 1. Madame Tremblay's - Commercial
> 2. Black House - Staff housing
> 3. McCauley House - Staff housing
> 4. N.W.M.P. C.O.'s House - Staff housing
> 5. N.W.M.P. Married Quarters - Staff housing
> 6. Old Court House - Office accommodation
> 7. Cassiar Building - Staff housing
> 8. Bank of North America Bldg - Seasonal staff housing on second floor interior for future lease but not yet finished.
> 9. Klondike Thawing Machine Building - Storage
>
> The exteriors of all these structures have been restored to the early Dawson period and we have placed identifying or interpretive signs on or near each of these structures, which are all considered as contributing to the Park Interpretive program.
>
> Klondike National Historic Sites planned projects of significance for the next ten to fifteen years include:
>
> 1. Development of a Mining Exhibit
> 2. Restoration of the Robert Service Cabin
> 3. Restoration of St. Andrew's Manse
> 4. Restoration of Winaut's Store
> 5. Restoration of Dawson Daily News
> 6. Restoration of Billy Bigg's Blacksmith Shop
> 7. Restoration of S.S. Keno
> 8. Restoration of Commissioner's Residence
> 9. Restoration of Red Feather Saloon
>
> Although it is proposed to undertake these and some other less significant infrastructure projects, in the next ten to fifteen years, precise scheduling is subject to the availability of resources each year."
> (Personal communication - Mr. S. Malfair 82/12/08.)

Negotiations for transfer of responsibility for the B.C. and Yukon portion of the Chilkoot Trail to Parks Canada have recently concluded and a formal land transfer agreement is anticipated soon. This will result in establishment of the Canadian portion of the trail as a National Historic Park.

Kluane National Park Reserve was formally established in 1976 with the primary objective being preservation of its wilderness character. Proposed development of the park as outlined in the Kluane National Park Management Plan, includes provision of limited access and guided interpretation and education facilities, controlled access to the Kaskawalsh Glacier from the Slims River area, and future development of water-based recreation in the Mush-Bates Lakes area. Although most major facility development will be outside of the Yukon River Basin, access to or from the park is primarily through the Basin via the Alaska Highway.

B. Government of Yukon

The Territorial Government is responsible for a number of historic sites in Whitehorse, Dawson and Carcross, and has jurisdiction over several lots at Fort Selkirk.

Most of these sites have not been developed, though proposals and plans exist for their future restoration and interpretation (see Fort Selkirk Historic Park Proposal, and Tourism Development Plans for Whitehorse and Dawson).

The Kluane and McArthur game sanctuaries are primarily land based wildlife reserves and although wildlife viewing opportunities within them exist, they have not been developed.

C. Province of British Columbia

About one third of Atlin Provincial Park is occupied by glaciers, mostly outside of the Yukon River Basin. The rest of the Park includes the southern portion of Atlin Lake (the largest water body in B.C.), several smaller lakes, and some of the most spectacular scenery in the province. The Park is managed as a wilderness area, with no maintained trails or campgrounds. It offers high quality boating, fishing, hunting, camping, nature study and winter sports. The Park status also offers some protection for Atlin Gold Rush historic sites and artifacts.

In addition to Atlin Park, Charlie Cole Creek has been designated as an Ecological Reserve. The purpose of the reserve is to conserve "a unique geological phenomenon comprising three or more cold water mineral springs; a formation rarely occurring in the north". (Application for Ecological Reserve - Charlie Cole Creek: Appl. No. 247.)

II) Planned, Proposed and Potential Parks and Other Designations

Map Series B, (Vol. II) Table 11 and Appendix III (Vol. III) summarizes and illustrate areas in the Basin which have been identified by government and private agencies as having parks, recreation and/or tourism potential. The amount and detail of information for these areas varies considerably, as do proposed designations for conservation, protection and development. As can be seen from Map Series B, Map E and Table 11, several areas in the Basin have been identified by more than one group as having good to outstanding potential. These areas include the 30 mile section of the Yukon River from Lower Laberge to Hootalinqua; various sites on major headwater lakes including Teslin, Bennett, Marsh and Tagish Lakes; the Gold Rush Trail including Chilkoot Pass, Bennett Lake and the Yukon River, and the Kluane area.

Table 11 **Planned, Proposed and Potential Designations**

Agency/Area	**Information and Current Status**
A) Government of Canada	
Parks Canada	
Yukon River - Southern Ogilvies Kluane Aishihik	Natural areas of Canadian significance. Some inventory and biophysical data available.
Keele Peak	Preliminary area
Kluane National Park Klondike National Historic Sites, Dawson. Chilkoot Trail	Continued, ongoing management and development of these sites and features.
Volcano Mountain	Possible National Landmark.
Other Agencies	
Lake Laberge Little Salmon Lake Mayo Lake Quiet Lake Bennett-Tagish Lakes	Areas of interest identified in 1968 and 1971 DIAND studies.
Yukon River Teslin River MacMillan River Nisutlin River White River Pelly River Ross River Stewart River Sixty-Mile River Klondike River	Rivers surveyed in the 1971 "Wild Rivers" studies.

B) Government of Yukon

Proposed Parks

Chadburn Lake	Within city limits but owned by YTG. Block Land Transfer to YTG; Park plan prepared.
Fort Selkirk (R^1)*	Proposed Historic Park
Kusawa Lake (R^1)	Some inventory and biophysical data available. Park proposal is being pursued.
Ethel Lake (R^1)	Some inventory and biophysical data available, but park proposal not being actively pursued.
Tombstone Mnt. (R^2)	Some inventory and biophysical data available, but park proposal not being actively pursued.
Alligator Lake(R^3) Annie Lake Road Area (R^3)	Some biophysical data available but park proposals are not being actively pursued.
Black Ram Hot Springs (R^3)	Within McArthur Game Sanctuary
Millhaven Bay (R^4)	Some biophysical data available. Park proposals associated with Native Land Claims.

Other Reserve Applications or Proposals

Coglan Lake Daughney Lake Diamin Lake	Applications for small parcels of land for recreational purposes have been received by

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* Refer to Footnotes at the end of Table 11.

Other Reserve Applications or Proposals (Cont'd)

	Ottawa, but not approved. Development is not being actively pursued at the present time.
Claire Lake	Small parcel Block Land Transfer to YTG.
Frenchman-Tatchun Lakes	Park planning is underway and Parks Reserve status has been applied for. Development will begin with construction of two campgrounds in 1984.
30 Mile Section of the Yukon River from Lower Laberge to Hootalinqua	Joint DIAND/Yukon proposal for Canadian Heritage River Status is being actively pursued.

Areas of Interest

Wolverine Plateau 30 Section of the Yukon River Coghlan, Frank and Mandanna Lakes Fortin and Pelly Lakes Wellesley Lake Keele Peak	These areas have been identified, but with the exception of the 30 mile section of the Yukon River, are not being actively pursued by Government of Yukon.

C) Government of British Columbia

Charlie Cole Creek	Ecologial Reserve #102
Recreational Map Reserves	A number of areas in the B.C. portion of the Basin have map Reserves on them for preservation and/or recreational consideration. Status is not legally designated.

D) Joint Government Studies

Yukon River	A Concept Plan for the Yukon River was prepared by Parks Canada and Government of Yukon. The plan has not been implemented.
Proposed Canadian Heritage River System (CHRS)	
30 Mile Section of the Yukon River	Joint Government of Yukon/DIAND proposal for CHRS status for this portion of the Yukon River is being actively pursued.

E) International Proposal

Klondike Gold Rush International Historic Park. (KGRIHP)	Includes the Chilkoot Trail, Bennett Lake and the Yukon River to Dawson in the Basin, as well as several areas in the United States. The concept is still in the proposal stage.

F) Private Agency Proposals

International Biological Program (IBP)	Details in Text
Environmentally Significant Areas (ESA)	
National Wildlife Areas	Proposal, but information was not available.

Footnotes for Table 11

R^1 Applications for Park Reservations were received by DIAND from the Government of the Yukon Territory. These have not been approved by Ottawa and have not been entered as Territorial Parks. However, a provisional reserve has been placed on each area in the name of the Department of Indian Affairs and Northern Development by letter only of Jan. 4, 1973.

R^2 Recreational reserve applications were received from the Government of the Yukon Territory. They have not been approved by Ottawa and therefore they are listed as being received and not approved. Sketches as supplied with the applications are attached for information and identification.

R^3 Application for reserves have been received by DIAND from Government of Yukon. They have been approved and reserved by Ottawa letter for the Territorial Government.

R^4 A campground/park transferred from the Yukon Forest Service to the Government of Yukon. The campground has been set aside by reservation only and not by Order in Council. (This designation for Millhaven Bay is outdated, and is currently being revised.)

(Source for Footnotes: Government of Yukon, Department of Renewable Renewable Resources File Information)

For the purposes of this study, descriptions will include areas within the Basin which have been identified as:

a) having parks potential
b) requiring preservation, conservation and/or management.
c) having potential for various types of outdoor recreation.
d) having considerable inventory and other data available.

Plans and proposals will be summarized under the following headings:

a) Government of Canada
b) Government of Yukon
c) Province of B.C.
d) Joint Government proposals
e) International proposals
f) Private agency proposals

The common goal of various proposed designations is to provide some sort of protection for potential recreation, tourism and parks resources in order to ensure their future availability at a quality required to meet tourist and resident demands and expectations. This requires having an established system of management and protection for conservation and outdoor recreation areas. At the present time, there is no comprehensive system in place.

A) Government of Canada

1. Parks Canada

The long range objective of Parks Canada policy is to have National Park representation for each of the 48 natural regions identified in Canada. Within Region 7, which includes most of the Yukon River Basin, four Natural Areas of Canadian Significance (NACS) and one preliminary area have been identified. Two of the NAC's (Kluane-Aishihik and Yukon River-Southern Ogilvie Mountains) and the preliminary area (Keele Peak) are within the Yukon River Basin (Map B1 and B4, Vol. II). These areas are currently not being actively pursued for park establishment, but they could serve as a focus for discussion at such time as park establishment in Region 7 is considered within B.C. or Yukon. Preliminary biophysical data on each area is available in a 1982 document which summarizes and ranks the four NAC's according to their representativeness of Region 7 (Government of Canada, Parks Canada, 1982). Southern Ogilvies and Kluane-Aishihik rank 2nd and 3rd behind the Mt. Edziza region in northern B.C. Keele Peake has been identified as an area of interest, but Parks Canada has not collected information on the area (Environmental Land Use Studies in the MacMillan Pass area included Keele Peak and detailed resource information is now available from Government of Yukon).

The National Landmarks discussion paper suggests the establishment "... of a complementary (to Parks) system that would focus on exceptional individual features of the natural landscape that might otherwise go unprotected:" (Government of Canada, Parks Canada, 1981). The system would provide a method of protecting small sites, as opposed to ecosystems, and would strive to include exceptional natural, unique and rare sites of Canadian significance.

Sites would be selected on the basis of their representiveness of natural themes including geology, wildlife and vegetation. A flexible system whereby the federal and provincial governments would each designate, own and administer individual landmarks, is suggested. The 1973 document, "Byways and Special Places Programme: Possible Applications in Southwestern Yukon and B.C." describes the cenozoic volcano (Volcano Mountain) near the confluence of the Yukon and Pelly Rivers, which could have National Landmark Potential (Map B1, Vol. II). Unique rare vegetation communities near northern hot springs could also be considered. The National Landmarks concept is still in the "discussion" stage, and has not yet been implemented.

2. Other Federal Government Agencies

In 1968 and 1971 the Department of Indian Affairs and Northern Development (DIAND) conducted several preliminary inventory-type studies on potential recreational and park areas (Table 11). With the exception of cottage lot development on some of the lakes, overall recreation planning and development in these areas have not been pursued by DIAND. Table 11 also lists the rivers in the Basin which were described in the 1971 Wild Rivers Surveys. These surveys provide some basic biophysical descriptive information on the rivers, and in some cases, attempts to rate them for potential recreational use. The Yukon River was identified as one of the top ten wild rivers in Canada.

B) Government of Yukon

Map Series B (Vol. II) and Table 11 show areas within the Basin which have been identified by various YTG agencies as having parks, recreation and tourism potential and/or require protection or conservation of some sort.

Eight of the identified areas have provisional reserve status, which means that YTG applications for reserves for parks purposes for these areas have been received by Otttawa and letter and map reservations have been identified. These areas do not have any special protective status.

Preliminary park proposals have been prepared for Fort Selkirk and Chadburn Lake, but have not been fully implemented. Chadburn Lake Park Reserve was created by a YTG Order in Council in 1970 and the land is protected from sale or lease by the government.

The majority of lands in the proposed Fort Selkirk Historic Park area are owned by the Crown. A few lots are owned privately, and YTG owns some lots, and the streets and roads. The area has also been identified under Land Claims. The proposed document describes government plans for acquiring the land, and management and development proposals for the park.

Planning is underway for the Frenchman-Tatchun proposed park area, beginning with construction of two new campgrounds.

YTG, in cooperation with DIAND, is currently preparing a document proposing Canadian Heritage River System Status for a 30 mile section of the Yukon River from Lower Laberge to Hootalinqua. The nomination will be discussed in more detail later in this report.

Biophysical and land use data is available for some areas, but the level of information varies and for the most part is not at a level required for parks planning or recreation development. In several areas, inventory and other information which has been collected for purposes other than specific parks planning is available and useful. Table 11 and the "Detailed Study Areas" section describes this information.

C) Province of British Columbia

Maps B5 and B6 (Vol. II) illustrate recreation reserves located in the B.C. section of the Basin. Most of these reserves are map notations (not protected by legislation) and for the most part, are undeveloped. The Fourth of July Eskers and White Pass Lichen areas have been proposed as Environmentally Significant Areas, but have not been established as such because of hunting road and mineral potential conflicts, respectively. Extensive development of Atlin Park, other than possible fly-in guided tours suggested in a Tourism Development Plan for the Yellowhead 16 Region in B.C., is unlikely, since the park is designated for wilderness preservation and activities.

D) Joint Government Proposals

1. ARC Studies

In 1972, Parks Canada proposed a program by which "... land and water conservation routes which focus on historical and scenic resources, encompassed within associated environmental corridors" could be recognized, managed and protected. (Government of Canada, Parks Canada, 1973). The proposal included a number of historical, biophysical and recreational themes applicable to the Basin, and concluded that the Yukon River system was of particular interest as both a wild and historic river. In 1974, the Agreements for Recreation and Conservation Branch (ARC) of Parks Canada was formed and in a 1976 report entitled "Yukon River Historic Waterway, A Potential ARC Corridor" the Branch concluded that the Yukon River was a potential candidate for an ARC agreement between Parks Canada and YTG. The ARC Branch contracted two studies: one for Natural History Themes and a second for Historic Themes, and in 1978, ARC and YTG Renewable Resources jointly produced "Protection and Use Guidelines" for the river. A joint effort by YTG Department of Renewable Resources, ARC, and Parks Canada resulted in "A Concept Plan for the Yukon River - An Historical and Recreational Waterway (1980)". Although preliminary discussions between Parks Canada, DINA and YTG have been held to determine subsequent action, no progress has taken place. With the exception of a few site-specific developments noted elsewhere in this report, development of the Yukon River as a whole remains at the concept stage.

The preparation of the Concept Study and associated theme assessments has resulted in a considerable amount of inventory, planning and management information on the Yukon River. For each development area identified, policy and management guidelines for historical, and natural conservation, and recreation in the short and long term, are described. Overall historical conservation, natural conservation, recreation, interpretation and orientation policy are also summarized. Appendix III (Vol. II) summarizes the type and level of information available in the Concept Study. More detailed descriptions of historical and natural features are provided in the theme assessment documents: Natural History Themes and Resources Study, Yukon River, R. Herrick, 1977, ARC; and Theme and Resource Assessment, Yukon River Recreational and Historic Waterway, R.J. Friesen, 1978, ARC.

2. Canadian Heritage River System (CHRS)

Originating in 1978, the current CHRS proposal is the result of several years effort by a task force of federal, provincial and territorial government officials, to design a "... program which would identify outstanding examples of Canada's river heritage and ensure management which would provide for their continued enjoyment by Canadians now and in the future" (Government of Canada, Parks Canada, 1981).

The Minister of the Environment sent the proposal to provincial and territorial governments requesting their agreement-in-principle for the establishment of the system. The majority of replies received were favorable, and in 1983, a joint agreement was reached by the Department of Renewable Resources and the federal Department of Indian Affairs and Northern Development (DIAND), to establish a Canadian Heritage Rivers System program in Yukon.

The objective of the CHRS is to recognize and manage important Canadian rivers such that natural and human heritage which they represent are conserved and interpreted, and recreation and heritage appreciation opportunities are realized by Canadians and visitors.

Chart 5 summarizes the process through which a river would be nominated, accepted and subsequently managed as a CHRS river.

The federal, territorial and/or provincial government with jurisdiction over the potential river would be responsible for its nomination. The nomination would be judged by nominating and managing agencies (A CHRS Board composed of representatives of federal, territorial and provincial governments) on the basis of the river's ability to fulfill the CHRS objectives of natural and human heritage representation and provision of oustanding recreational opportunities. If accepted, the nominating agency would be responsible for producing a management plan which would describe how the river's outstanding values would be protected and enhanced.

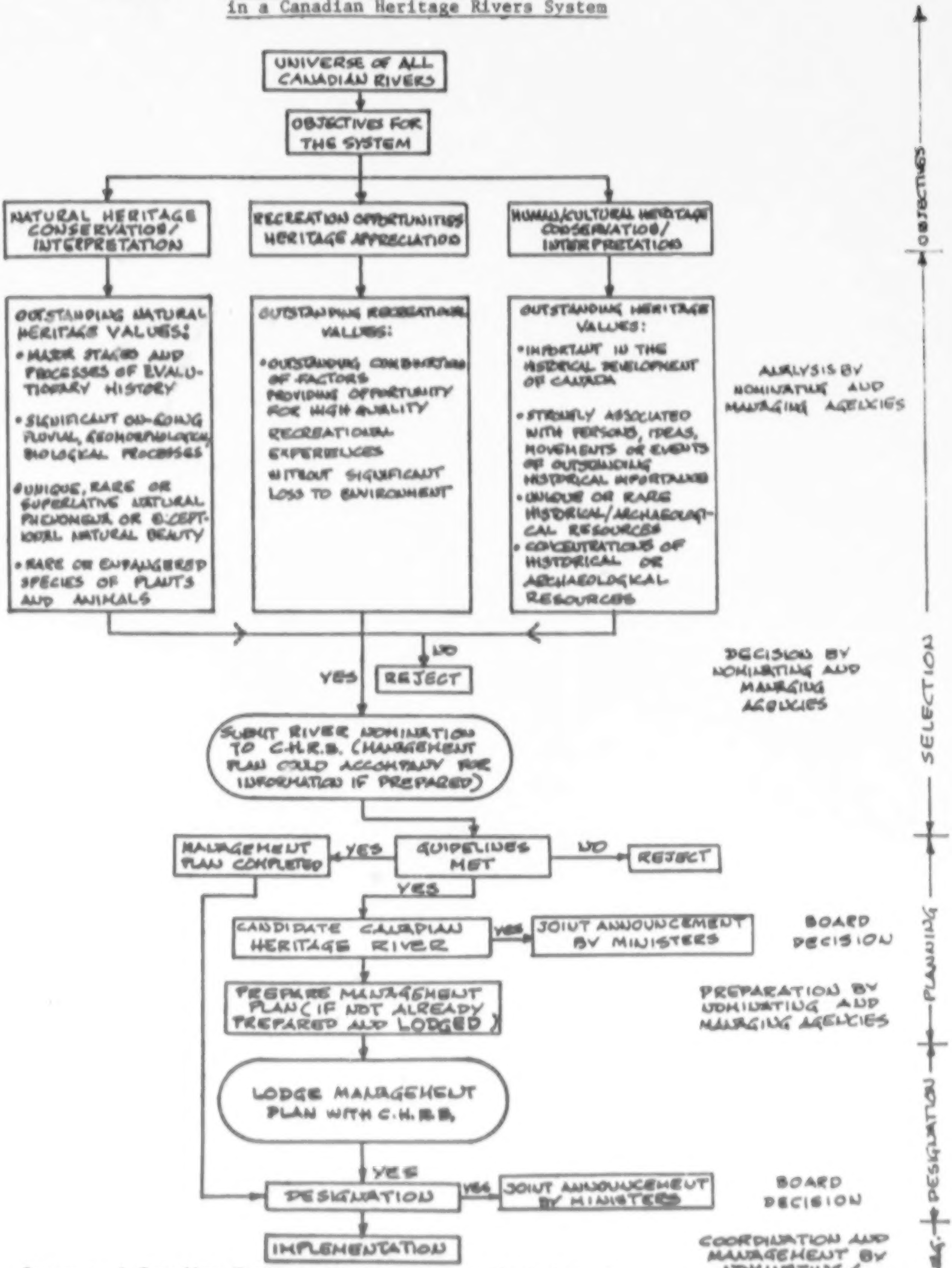
If the management plan meets the guidelines established by the CHRS Board, a CHRS designation would be awarded. The nominating agency or agencies would be responsible for the continued management of the river in accordance with the guidelines established and the overall objectives of the CHRS. If a river were to deteriorate below the original CHRS guidelines, it could be removed from the system.

The YTG Department of Renewable Resources and DIAND are currently preparing a nomination document for CHRS status for the 30 mile section of the Yukon River from Lower Laberge to Hootalinqua. The document describes in detail the significant historical and recreational features which qualify it for CHRS status. Some of these features include:

- important human heritage features in fairly good condition, representing the transportation function of the river from the Gold Rush to the 1950's.

- unique and spectacular scenic values including vistas of Lower Laberge; narrow winding channels bordered by sand and gravel bluffs, and clear green water.

CHART 5 Process for the Inclusion of Rivers in a Canadian Heritage Rivers System


UNIVERSE OF ALL CANADIAN RIVERS
OBJECTIVES FOR THE SYSTEM
NATURAL HERITAGE CONSERVATION/ INTERPRETATION
RECREATION OPPORTUNITIES HERITAGE APPRECIATION
HUMAN/CULTURAL HERITAGE CONSERVATION/ INTERPRETATION
OUTSTANDING NATURAL HERITAGE VALUES:
• MAJOR STAGES AND PROCESSES OF EVOLUTIONARY HISTORY
• SIGNIFICANT ON-GOING FLUVIAL, GEOMORPHOLOGICAL, BIOLOGICAL PROCESSES
• UNIQUE, RARE OR SUPERLATIVE NATURAL PHENOMENA OR EXCEPTIONAL NATURAL BEAUTY
• RARE OR ENDANGERED SPECIES OF PLANTS AND ANIMALS
OUTSTANDING RECREATIONAL VALUES:
• OUTSTANDING COMBINATION OF FACTORS PROVIDING OPPORTUNITY FOR HIGH QUALITY RECREATIONAL EXPERIENCES WITHOUT SIGNIFICANT LOSS TO ENVIRONMENT
OUTSTANDING HERITAGE VALUES:
• IMPORTANT IN THE HISTORICAL DEVELOPMENT OF CANADA
• STRONGLY ASSOCIATED WITH PERSONS, IDEAS, MOVEMENTS OR EVENTS OF OUTSTANDING HISTORICAL IMPORTANCE
• UNIQUE OR RARE HISTORICAL/ARCHAEOLOGICAL RESOURCES
• CONCENTRATIONS OF HISTORICAL OR ARCHAEOLOGICAL RESOURCES
ANALYSIS BY NOMINATING AND MANAGING AGENCIES
NO
YES
REJECT
DECISION BY NOMINATING AND MANAGING AGENCIES
SUBMIT RIVER NOMINATION TO C.H.R.B. (MANAGEMENT PLAN COULD ACCOMPANY FOR INFORMATION IF PREPARED)
MANAGEMENT PLAN COMPLETED
YES
GUIDELINES MET
NO
REJECT
YES
CANDIDATE CANADIAN HERITAGE RIVER
YES
JOINT ANNOUNCEMENT BY MINISTERS
BOARD DECISION
PREPARE MANAGEMENT PLAN (IF NOT ALREADY PREPARED AND LODGED)
PREPARATION BY NOMINATING AND MANAGING AGENCIES
LODGE MANAGEMENT PLAN WITH C.H.R.B.
YES
DESIGNATION
YES
JOINT ANNOUNCEMENT BY MINISTERS
BOARD DECISION
IMPLEMENTATION
COORDINATION AND MANAGEMENT BY NOMINATING/ MANAGING AGENCIES
OBJECTIVES
SELECTION
PLANNING
DESIGNATION
MANAG.

Source: A Canadian Heritage Rivers System: Final Report
Government of Canada, Parks Canada, ARC Branch

- several raptor nesting sites, medium to high bear densities and important furbearer and salmon habitat.

- a combination of scenic beauty, wilderness character and visible heritage resources which attract resident and tourist recreationists. Although the river is fast flowing and runs through canyons, the lack of rapids make it accessible to novice canoeists as well as experienced river travelers.

Designation of this section of the river would probably result in increased recreational use. The proposed management plan would address necessary management actions required to prevent deterioration of natural and heritage resources.

E) International Proposals

The concept for a Klondike Gold Rush International Historic Park (KGRIHP) to commemorate the Klondike Gold Rush, originated in the late 1960's with Parks Canada and the U.S. National Parks Service. In 1971, an International Advisory Committee consisting of representatives from the U.S. Parks Service, Alaska, Parks Canada, B.C. and Yukon was formed to coordinate planning and development, however, the committee has not met for several years. Several agencies are fulfilling isolated mandates but the concept as a whole has not been actively pursued.

The concept includes the following components:

U.S. Parks Service:

Seattle: Pioneer Square restoration opened in 1979
Skagway: ongoing restoration
Chilkoot Trail.

B.C.:

Chilkoot Trail (in process of transfer to Parks Canada)

Yukon Parks Canada:

Chilkoot Trail (in process of transfer to Parks Canada)
S.S. Klondike
Dawson Klondike National Historic Sites

Parks Canada/YTG:

Yukon River Concept Planning Studies

Nearly all development and operations to date of both U.S. and Canadian components have been in the context of individual sites belonging to respective national, provincial and territorial governments. However, the overall concept and individual development help emphasize the value of the Yukon River waterway as an important international natural and historic feature.

F) Private Agency Proposals

Several independent organizations have indicated areas in the Yukon they feel are in need of, or worthy of protection. These proposals include:

1) International Biological Program (IBP) Ecological Sites
2) Environmentally Significant Areas (ESA)

1) The IBP represents a cooperative effort between the "International Council of Scientific Unions" and 58 participating nations around the world, to study land to better understand life support systems. In Canada, the Canadian Committee for IBP, supported by the National Research Council for Canada, recommended 10 geographical area, each to be studied by a panel of volunteer scientists and interested persons. These panels are independent organizations, not government agencies, and the areas recommended by them are, for the most part, map designations only, unless they fall within areas already protected at a federal, territorial or provincial level. The Yukon, unlike B.C., has no legislation which can formally recognize or protect IBP sites. Panel #10, which includes the study area, has mapped and described a number of biologically important areas representing a variety of plant and animal communities (Map Series B, Vol. II). Brief descriptions include size, location, ecosystem description, economic potential, exceptional interest and recommended protective status. Table 12 illustrates the level of information supplied for each site.

2) The Environmentally Significant Areas proposal, commissioned by the Canadian Arctic Resources Committee, presents a series of maps and monographs describing areas in the Yukon that have been identified as "worthy of some degree of protection and/or preservation" (Yukon Environmentally Significant Areas, 1982). Potential ESA's were identified from the Department of Environment's Land Use Map Series; Oswald and Senyk's Ecoregions of the Yukon Territory IBP information and from lands identified by other government and private agencies. Table 13 illustrates the level of information provided in the ESA document.

TABLE 12 Examples of an IBP Area Description

SITE NAME:	Pelly Mountains
SITE NUMBER:	61
LOCATION:	Yukon Territory, about 12 miles southwest of Ross River south of the Canol Road between Ram Creek and Porcupine Creek.
SIZE:	90 square miles approximately.
ECOSYSTEM:	Boreal Forest Zone, Eastern Yukon Section: home range of one population of Stone's sheep.
DESCRIPTION:	Mountainous region extensively glaciated with related features including cirques, hanging valleys, scoured u-shaped valleys, lateral moraines and gravel out[illegible]h. Plant communities include valley forest shrub communities of u-shaped valleys, lower montane communities of open shrub-forest, sub-alpine meadow community and cirque, meadow community.
ECONOMIC POTENTIAL:	Mineral - low to moderate; Hydrocarbon - poor; Timber - low; Agriculture - extremely severe limitations (D); Recreation - medium, scenic.
EXCEPTIONAL INTEREST:	Proposed as a Stone's sheep reserve, the site contains one large home range group of this species.
PROTECTIVE STATUS:	Land Use Regulations.
FURTHER INFORMATION:	Mr. D. M. Gubbe Department of Plant Ecology University of Saskatchewan Saskatoon, Saskatchewan Dr. V. Geist Faculty of Environmental Design University of Calgary Calgary, Alberta T2Z 1N4

Source: IBP Ecological Sites in Sub Arctic Canada, 1975, Dorothy Beckel (ed.)

TABLE 13 Examples of an ESA Description

SITE 16:	Pelly Mountains
AREA:	285 km^2 (110 mi.^{2}).
	This is a proposed IBP site (No. 61) in the St. Cyr Range of the Pelly Mountains southwest of the Ross River townsite. It is a mountainous region with cirques, hanging valleys, u-shaped valleys, lateral moranes, and gravel outwash. The area is bordered by Ram Creek and Porcupine Creek and the Lapie River. Boreal Forest vegetation is found throughout.
CRITERIA FOR SELECTION:	- thinhorn sheep habitat (all functions, year-round). - moose, thinhorn sheep, and woodland caribou habitat along Magundy River valley, extending into the highlands. - ducks and geese nesting. - crane migration flyway. - a proposed Stone's sheep reserve containing one large home range group of this species.
ECOREGION REPRESENTATION:	Falls entirely within ecoregion 4. Representation is good.
LAND USE:	The Canol Road forms the northwest boundary. No other conflicts are evident.
RECREATION ACTIVITIES:	Alpine pursuits, camping on the Lapie River.
RECREATION POTENTIAL:	Medium.
BIOPHYSICAL RATING:	Low.
DEGREE OF THREAT:	Existing - low. Potential - Medium.

Source: Environmentally Significant Areas of the Yukon Territory, 1980.
John Theberge, Gordon Nelson and Terry Fenge.

III) Areas of More Detailed Study

A number of areas identified as having parks and recreation potential have been studied in more detail in connection with projects and proposals not necessarily directly related to tourism parks and recreation. A lot of this information could be useful for parks, recreation and tourism planning - especially biophysical inventories and studies, terrain ratings, and land use planning studies. Map E (Vol. II) and the descriptions below, illustrate and summarize the areas covered and the information that has been collected. The general studies referred to can be found in the bibliography.

A) Yukon River Corridor

1) Detailed descriptions of biophysical, historic and aesthetic features are included in the Yukon River Concept Plan and related natural and cultural historic theme studies, river use guidelines and river guides. The study also recommends development policies and plans for the corridor.

2) Some use statistics are available through Government of Yukon.

3) Several archaeological studies at historic sites.

4) Cottaging studies inventory for parts of the river.

5) Travel information is available through several tour and wilderness guides offering guided and non-guided trips (Table 7).

B) Alaska Highway Pipeline Corridor Studies

Recent, detailed biophysical and socio-economic studies and maps are available in the Yukon Archives. The study corridor crosses major rivers and several lakes, including Kluane Lake.

C) Dempster Highway Corridor

The recently completed Dempster Highway Planning Study includes biophysical and other descriptive information and management recommendations.

D) Kusawa Lake Area

A detailed Ecological Land Classification Study has been completed, which includes biophysical descriptions, terrain use ratings and interpretive tables and maps for the region. The study was carried out as part of a preliminary park planning program.

E) Kluane Area

1) Biophysical, socio-economic, terrain analysis, historical and cultural information has been collected in an unreleased management plan. Vegetation and wildlife studies have also been carried out in the area.

2) Detailed biophysical studies have been carried out in the Kluane Park area.

3) A Tourism Development Plan has been completed and released for public review.

F) Shakwak Corridor

Highway planning, engineering and impact studies are available at the Yukon Archives.

G) Environmental Land Use Studies

Detailed vegetation, aquatics, geology, archaeology and soil inventories, studies and maps have been prepared for the Southern Lakes and MacMillan Pass areas. Additional aquatics studies have been carried out in the Atlin and MacMillan River areas.

H) Ibex Pass

1) An Ibex Pass Resource Study and Management Plan has been prepared.
2) Some detailed wildlife studies have been carried out in this area.

I) Dawson and Whitehorse

1) Tourism Development Plans have been prepared for both areas.
2) Ongoing historic sites and features work and development evaluations are being carried out in Dawson by Parks Canada.
3) Regional Plans have been completed for Whitehorse North and South.
4) The municipal governments of Whitehorse and Dawson are currently preparing revised management and development plans which include parks, tourism and recreation development.

J) Cottage Lot Surveys

Most lakes and major rivers in the Basin have been inventoried and at a preliminary level, and described in terms of suitability for recreational cottaging, (see Cottaging Bibliography). The section in this report on cottaging lists the lakes where more detailed surveys, and in most cases, site planning, has been carried out.

K) River Guides

Several private guides and tour companies and the Yukon Voyageurs and Canoe Club have prepared or are in the process of preparing river guides for recreational canoeists and rafters. Some of the rivers for which detailed guides have been prepared include the Yukon, Teslin, Nisutlin and Big Salmon Rivers. Several more general guidebooks on recreational rivers in the Yukon are also available. (See Bibliography.)

L) Energy Studies

Hydroelectric planning and potential studies have been done on numerous rivers and sites in the Basin, but only a few of these studies include biophysical, historical and socio-economic information useful for park, recreation and tourism purposes. In most cases, the information consists of a compilation of data from other sources relevant to the site being studied. Little new information has been collected for hydro studies directly related to parks, tourism and recreation. "The Inventory of Yukon Hydroelectric Sites" completed by Monenco (1983) for the Basin Study, lists sites for which biophysical, environmental and socio-economic information has been compiled.

M) Wildlife Studies

Wildlife studies have been carried out in some areas in the Basin. More detailed information on such studies can be obtained from Government of Yukon, Department of Renewable Resources and from the Canadian Wildlife Service.

CHAPTER THREE: HERITAGE RESOURCES

The Gold Rush was probably the most important historical event in the Territory in terms of its effect on subsequent development. Most inventory, research and rehabilitation/stabilization work on historic resources done to date reflects this emphasis, and the value of Yukon's Gold Rush history to tourism. Information on pre-contact, archaeological resources, and on early explorations by white traders is less complete. The known distribution of archaeological sites is more a reflection of the inventories completed to date, rather than on distribution of sites, and the Council for Yukon Indians and other government and private agencies have expressed concern that available information is not adequate for making management decisions. Information is also incomplete on early white traders who explored water routes and developed the rudimentary infrastructure for subsequent prospecting and exploration of Yukon's natural resources.

Yukon's historic resources play a major role in attracting and holding tourists in the Yukon as well as being a source of education, enjoyment and identity for Yukon residents. The Territory's wilderness character and Euro-Canadian "frontier" image are enhanced by the heritage that these sites and features represent. Although Gold Rush history is important, agencies and individuals concerned with heritage resources and tourism are stressing the need to expand research and protection of the Territory's heritage resources to include more archaeological and pre-contact features, and to place more emphasis on the Territory's history before (and after) the Gold Rush. The goal of such a program would be to create balanced representation of the Basin's heritage resources.

The proximity of most historic and archaeological sites to waterways, combined with increasing recreational and other water uses, has resulted in ongoing and potential deterioration and destruction of some sites. The close relationship between proposed and potential water uses and heritage resources is a factor which must be taken into account in heritage resource assessments and proposed revised heritage resource legislation.

This section will discuss pre and post contact heritage resources, museums, proposed research and development related to these resources and existing and proposed heritage resource policy. Map Series C (Vol. II) and Appendix IV (Vol. III) provide illustrative and more detailed information on the topics discussed in this chapter.

I) Pre-Contact Heritage Resources

Although there is an overall lack of archaeological and native history information available for the Basin, some inventory, mapping and detailed studies have been carried out in selected areas. Council for Yukon Indians (CYI) and several other agencies have mapped inventory data, and the CYI library contains most studies done to date. The Archaeological Survey of Canada has mapped most of the known archaeological sites in the Basin (see Map Bibliography). However, this information does not accurately represent the actual distribution of sites in the Basin, rather the areas which have been inventoried. This is true for B.C. sections of the Basin as well. Most archaeological inventories have been carried out in association with other land and resource use studies, rather than for historical research, and as a result, many potentially valuable archaeological sites have not even been located, let alone studied. Given that rivers and lakes were important transportation routes for native people, it is likely that many potentially important sites will be located near water (Greer, 1982).

Pre-contact historic information is probably not representative of existing sites and features in the Basin, and as a result, native heritage resources may not be adequately represented or taken into account in descriptions or assessments of the Basin's heritage resources. It is important that this lack of data is recognized when trying to determine potential impacts of developments on archaeological resources. Of particular concern to CYI is the current lack of policy concerning protection of archaeological resources which may be impacted on or destroyed as a result of land or water developments including tourism, parks and recreation development.

Steps to ensure the protection of heritage resources are proposed in new heritage resource legislation for the Territory, however, the government has made no commitment to include a Heritage Resource Assessment process or to ensure that government as well as private agencies are required to take the necessary steps to avoid or minimize impacts on heritage resources that any development might have.

II) Post-Contact Heritage Resources

Appendix IV (Vol. III) and Map Series C (Vol. II) summarize and illustrate some historic sites and trails in the Basin. The information was supplied by Yukon and B.C. government agencies responsible for heritage resources, and does not include all known sites. With the exception of recognized sites noted in previous chapters, the sites and features discussed here have no special protective status, are considered to be on Crown land and are therefore federal property. Several private agencies, associations and individuals have compiled lists and inventories of sites, but these have not been collected or summarized as part of this study.

Most of the sites identified are associated with Yukon's Gold Rush history and nearly all of the sites are found on or near major waterways, especially the Yukon River Corridor. Site descriptions and analyses were carried out for historic sites along the Yukon River (Friesen, 1978) as part of the Yukon River Concept Study, however the information requires updating and re-analysis in order to be in line with current government policy and planning objectives. For the most part, other areas in the Basin have not been adequately studied especially with respect to pre gold rush history. Information gaps along other waterways is probably more a reflection of lack of inventory rather than lack of sites or features.

Existing sites which are being maintained and/or developed by Parks Canada and YTG have been discussed earlier. Map Series C (Vol. II) illustrates "undesignated" sites (which are not formally recognized and/or protected) currently being developed by YTG. These sites include Lower Laberge, Hootalinqua and Fort Selkirk. As noted in the previous chapter, YTG and Parks Canada have recently completed work on several features in Dawson.

III) Museums

There are seven museums currently operating in the Basin, providing important tourist attractions and preserving and displaying important aspects of the Basin's history (Table 14). However, a considerable amount of Yukon's cultural and archaeological resources have been taken out of the Territory because adequate facilities for restoration, storage and display are not available in Yukon.

Table 14 MUSEUMS IN THE YUKON RIVER BASIN

1. Dawson City Museum - Dawson
2. MacBride Museum - Whitehorse
3. Old Log Church Museum - Whitehorse
4. Kluane Museum of Natural History - Burwash Landing
5. George Johnston Museum - Teslin
6. Keno Mining Museum - Keno
7. Atlin Historical Museum - Atlin

Museums have also been proposed for Carcross, Watson Lake and Faro, but are not being pursued at the current time (Kyte, 1980).

IV) Proposed Developments

Although Parks Canada has no major proposals for development of historic sites other than ongoing work in Dawson and management of the Chilkoot Trail, the governments of B.C. and Yukon have both presented plans and proposals for historic sites development as part of Tourism Development Plans and in Yukon, as an historic park proposal.

The Fort Selkirk area has been proposed as a Territorial Historic Park. A Park proposal has been prepared which described the site's physical and historic features and significance, and outlines plans for future management and development. However, the park proposal is currently "on hold" pending settlement of Native Land Claims.

Tourism development plans, for Dawson, Whitehorse, the Kluane Region and Atlin all include recommendations for development and restoration/preservation of historic sites as major components of potential tourism development (Appendix II, Vol. III). Specific proposals include:

- Development of Silver City and Dalton Post in the Kluane Area. Both developments are currently "on hold", pending settlement of private ownership at Silver City, and Land Claims at Dalton Post.

- Further development of Dawson's historic features centered around the gold rush theme and emphasizing authentic restoration.

- Restoration of some buildings in Whitehorse and development of an historic theme as part of an overall tourism development plan. However, the Yukon Historical and Museums Association considers many of these buildings beyond restoration or not significant enough to warrant restoration.

- Development of gold rush features in the Atlin area as a major tourist attraction.

V) Heritage Resources Policy

In B.C., identified heritage resources are protected to some extent by the Heritage Conservation Act. B.C. also has Guidelines for Heritage Resource Impact Assessments, which describes the information required on historic and archaeological resources as part of overall resource development schemes such as hydro and transportation.

Heritage resource policy in Yukon is currently undergoing revision. Five major policy recommendations have been formulated, which are designed to assist government agencies and the public in creating a more comprehensive heritage resource policy:

1. To broaden coverage in new heritage policy and legislation to provide for the recognition and protection of archaeological resources, paleontological resources and other heritage resources not presently covered.

2. To establish a Yukon Heritage Advisory Board, with a structure and function designed to ensure its effectiveness and as a forum for meaningful public participation and discussion of heritage issues.

3. To provide a legislative package of appropriate measures that will ensure the recognitions and protection of Yukon's significant heritage resources, based on a number of proposals outlined in detail in the policy recommendations document.

4. To establish policy provisions whereby Yukon Indian people will be ensured a major role in the preservation, development and management of their unique heritage.

5. To provide the mechanism necessary to establish a Heritage Preservation Trust, which could receive monetary and material donations from any source, to advance heritage conservation and development in Yukon.

(Source: "Preserving our Past" Policy Recommendations YTG Heritage Branch, September, 1983.)

The five recommendations which are described in more detail in the proposal document, address many of the issues and concerns raised in this chapter. Government and other agencies are currently reviewing the recommendations and draft legislation will probably be introduced in 1984.

CHAPTER FOUR: OUTDOOR RECREATION

Most existing and potential recreation opportunities in the Basin are associated with water features, shorelands, and with cultural and historic features, most of which are found near water. Recreational water related use by residents and visitors in the Basin is expected to increase in the future, and demand for water for other potentially conflicting water uses is also expected to increase. For these reasons, it is mandatory that the importance of water-based recreation in the Basin is identified, and in particular, that areas of existing recreational value and future potential are recognized and considered in overall planning and development of water resources.

This study uses existing data to describe recreation resources and their use and demand in the Basin, especially for those water bodies of particular importance for current and potential water related recreation. A considerable amount of descriptive information exists on the recreation resource itself, although much of this data was not collected for recreation oriented studies. Studies completed for the Tourism Parks and Recreation Work Group represent an initial step towards collecting, analyzing and summarizing useful data, and applying it to recreation planning. However, for the most part, available descriptive and biophysical data is not at a level required for recreation planning.

In order to present a complete picture of water-based recreation in the Basin, complementary resource use and demand information is necessary. Research for this study has shown that, with the exception of tourism-oriented data, use and demand information is practically non-existent, and therefore needs to be developed.

The lack of comprehensive recreation resource base, use and demand information is a reflection of the lack of an overall policy for planning, development and management of recreation in the Territory. To date, the various components of recreation resources and activities such as land, water, angling, hunting, cottaging, camping and tourism are managed by numerous federal and territorial government agencies, and there is no method in place to direct interaction and cooperation between them. In short, recreation "planning" in the Basin is a result of ad hoc, largely reactive development of the various components, without the benefit of an overall recreation policy.

The Government of Yukon, Department of Renewable Resources is responsible for outdoor recreation in the Territory, but apart from limited parks and campground planning, there are no comprehensive goals and objectives in place.

In this chapter, water related recreation activities are described and where possible, use and demand information is provided. These include camping and campgrounds and other recreational services and facilities, sport fishing, hunting and non-consumptive uses of wildlife, cottaging and boating. Several areas which have high recreational use and/or potential as identified in other studies are described in more detail.

I) Resident Recreation

Apart from non-resident, tourist-oriented data discussed in the Tourism chapter, there is very little information available on recreation resource use and demand in the Basin.

Resident travel accounted for an estimated one third of the total number of tourist trips in Yukon in 1982, however, there is little recent data indicating what resident travelers did on those trips; in particular, what water-based recreation was involved. Available information, which is discussed in more detail in following sections of this chapter, includes hunting and fishing statistics, limited campground use data, incomplete and out-of-date Yukon River use data, and general estimates and descriptions of recreational use on particular rivers and lakes.

The overall increase in leisure time combined with an increasing variety and quality of outdoor recreation equipment and opportunities has led to an increase in outdoor recreation in Canada. This trend is occurring in Yukon, indicated by increasing resident demand for resident outdoor recreation opportunities expressed by a variety of clubs and organizations, and a general increase in resident use of campgrounds (Government of Yukon, Department of Renewable Resources, Parks and Historic Resources, 1978).

A 1976 study of resident recreation in Yukon indicated the following trends:

a) Yukon residents participated in more outdoor recreation pursuits on a more regular basis than Canadians as a whole, though actual numbers are still small. The most popular activities were driving for pleasure, picnicing and fishing, followed by nature study, sightseeing, photography and canoeing in the summer.

b) About one quarter of those surveyed took their longest annual vacation in the Territory, and about half spent at least one of their shorter vacations there.

c) A greater proportion of Yukoners own and use outdoor recreation equipment compared to the national average, especially fishing, camping and hunting gear.

d) There is considerable resident participation in outdoor recreation activities for which services and facilties are not provided.

(Burton, 1977)

Burton also tried to determine "levels of satisfaction and dissatisfaction" among resident users. He came to the conclusion that the most important factor was "choice in leisure pursuits". He found that almost the same proportion of residents wanted more development as those who did not, but he suggested that the main reason for not wanting further development was probably fear of too much organization and restriction, rather than provision of more organized services and facilities.

The conflict between providing management that ensures the continued quality of recreational resources and meets increasing demands for services and facilties and users' desire of freedom in their leisure pursuits, will probably be an ongoing management concern.

There is not enough recent information available to indicate whether the trends Burton noted have changed, or to give a reliable picture of current water related outdoor recreation use and demand in the Basin.

II) Recreation Services and Facilities

Map Series A (Vol. II) and Tables 7 and 15 to 19 illustrate the number, location and variety of recreation and tourism related services and facilities in the Basin. Government services include campgrounds and boat launches, rest areas, information centers, and point of interest sites. Private sector services include commercial campgrounds, lodges, sport fishing lodges and guide outfitters. Wilderness/adventure tour operators and equipment rental expeditors have been discussed in the tourism chapter and guide outfitters and sport fishing lodges are discussed later in this chapter. A detailed listing of services and facilities including those located in communities, can be found in recent B.C. and Yukon Tourist Travel Guides.

A) Government Campgrounds

The Yukon Government Department of Renewable Resources is responsible for the "Recreation Park" (campground) system in Yukon. The campground system evolved from a series of small campgrounds developed and managed on a largely non-recreational, forest district basis, and were intended for short term overnight use. Little thought was given to comprehensive campground planning with respect to potential outdoor recreation and tourist use, however, in 1979, with the start of the General Development Agreement on resource development, campground planning and development got a significant boost.

The document "Future Directions for a Recreation Park Campground System" (Government of Yukon, Parks & Historic Resources Branch, 1980) summarized the problems with the campground system at that time. Although not a formal policy document, it recommended the changes needed to create a campground system which would better cater to current and potential resident and tourist demand.

Recent campground planning and development in the Territory has been geared towards creating larger, wider spaced campgrounds and has involved closures and/or relocation of a number of existing campgrounds. The Government of Yukon's objective for having a campground every 60 - 100 miles has almost been achieved. The "Future Directions" study made several recommendations which, although not part of Government policy, are important components to consider in future campground planning.

In response to the apparent increase in campground use, the "Future Directions" report suggested that "there is a need to develop destination parks which will attract and keep tourists in the Yukon, to help reverse the trend of recent years which indicates the Yukon is an area that is "passed through" by increasing percentages of visitors". Map series A (Vol. II) shows that nearly all campgrounds in the Basin are located near rivers or lakes, so it is likely that development of "destination campgrounds" will involve recreational water use. The development of new campgrounds at Frenchman and Tatchun lakes along with the proposed park in the area, is an example of this concept.

Another important increasing trend is ad hoc wilderness camping, especially along popular recreational rivers such as the Yukon. While there are no immediate plans for establishing designated wilderness camping areas, there have been several proposals within the Yukon Government for research, planning and further development in this area.

Campground Use

1983 statistics collected from Yukon visitor information centres indicate that almost 70% of visitors who registered at the centres used campgrounds during all or some of their stay, and the 1982 Coupon Conversion Study concluded that Canadian and American visitors use campgrounds more than any other type of accommodation. The "Future Directions" report stated that residents appeared to be making much more extensive and recreational use of campgrounds, a trend which is expected to continue. At the present time there is no reliable system in place for collecting user information from either government or private campgrounds. Campground counters have collected general use data, but it does not differentiate between weekend versus weekday use, or visitor versus resident use. A reliable data collection system for campground use is required for effective campground planning and management.

B) Private Services and Facilities

Most privately owned lodges and campgrounds, other than those in communities are also located near lakes or rivers. Many offer guided fishing/recreation trips, or will arrange trips for clients with local guides and businesses. Commerical sport fishing operators, guide outfitters and wilderness/adventure travel are discussed in more detail in other chapters in this report.

TABLE 15

GOVERNMENT OF YUKON

CAMPGROUND AND FACILITY INVENTORY

	# of Sites	LOCATION		FACILITIES										SIGNS				
		Mile	Kilometre	Privies	Tables	Fire Places	Kitchen	Kitchen Stove & Table	Group Fire Pit	Wood Shelters	Water Well	Floating Docks	Other	I.D. Sign	Info. Boards	Wood	Water	Regs.
ALASKA HWY. #1.																		
Morley River	14	777	1251.2	4	16	12	1	1-2			1			Yes		Yes	Yes	Yes
Teslin Lake	19	813.1	1306.6	4	20	19	1	1-2		2	1		Boat Ramp	Yes		Yes	Yes	Yes
Squanga Lake	13	850.5	1368.4	4	15	13	1	1-2			n/a			Yes		Yes	Yes	Yes
Marsh Lake	47	890	1432	6	47	47	1	1-4	1	5	1	3	Foot Bridge	Yes		Yes	Yes	Yes
Wolf Creek	53	907	1458.6	14	53	53	2	2-4		4	2			Yes	Yes	Yes	Yes	Yes
Takhini River	7	959+9	1542.6	2	9	7				1				Yes		Yes	Yes	Yes
Kusawa Lake	65	959+14	1542.6	14	65	65		1-4	4	6	2	9	Boat Ramp	Yes		Yes	Yes	Yes
Congdon Creek	86	1071.7	1724.8	10	39	39	1	1-4	5	2				Yes	Yes	Yes	Yes	Yes
Lake Creek	14	1152.1	1853.7	4	14	14	1	1-2		1	1			Yes		Yes	Yes	Yes
Snag Junction	15	1188.8	1912.8	4	17	12	1	1-2					Boat Launch	Yes		Yes	Yes	Yes
KLONDIKE HWY. #2																		
Lake Laberge	21	142	224.7	6	21	21	1	1-2		2	1		Boat Ramp	Yes		Yes	Yes	Yes
Fox Lake	20	154	248	6	20	20	1	1-2		2	1		Boat Ramp	Yes		Yes	Yes	Yes
Twin Lakes Relocation slated	8	191	308.2	2	8	8				1	1		Boat Ramp	Yes		Yes	Yes	Yes
Carmacks	15	222	358	4	16	12					1		Boat Ramp	Yes		Yes	Yes	Yes
Tatchun Creek	15	238	383.5	4	16	15	1	1-2		2				Yes		Yes	Yes	Yes
Minto Landing	10	268	431.2	4	15	10				2	1		Table Shelter	Yes		Yes	Yes	Yes

(Cont'd)

TABLE 15 con't

GOVERNMENT OF YUKON

CAMPGROUND AND FACILITY INVENTORY

	# of Sites	LOCATION		FACILITIES										SIGNS				
		Mile	Kilometre	Privies	Tables	Fire Places	Kitchen	Kitchen Stove & Table	Group Fire Pit	Wood Shelters	Water Well	Floating Docks	Other	I.D. Sign	Info. Boards	Wood	Water	Regs.
KLONDIKE HWY.	#2 (cont'd)																	
Ethel Lake	14	333+15	526.7	4	14	14							Boat Launch			Yes	Yes	Yes
Mayo Road	8	33	53	4	8	8	1	1		1				Yes		Yes	Yes	Yes
Carcross-new (summer '83)	14			2						7								
CANOL ROAD HWY.	#8																	
Quiet Lake	8	60	98.7	2	8	8							Boat Ramp			Yes	Yes	Yes
Sidney Lake	3	31	49.3	2	3	3										Yes	Yes	Yes
Nisutlin R.	5	41.2	67.5	2	5	5										Yes	Yes	Yes
CAMPBELL HWY.	#9																	
Fisheye Lake (no info.)	5	260	430.3	2	5	5				1				Yes		Yes	Yes	Yes
Drury Creek	19	292	483.6	2	9	9				1	1		Boat Ramp	Yes		Yes	Yes	Yes
Little Salmon	12	312.9	516.9	2	12	12				1	1		Boat Ramp	Yes		Yes	Yes	Yes
Frenchman's L.	14	338.8+5	559.6	2	12	14				1	1		Boat Ramp	Yes		Yes	Yes	Yes
Lapie Canyon	18	226.5	375.5	6	18	18	1	1-4	1		1			Yes	Yes	Yes	Yes	Yes
DEMPSTER HWY.	#11																	
Tombstone Mtn.	22	45.1	74.5	2	16	16			1	1						Yes	Yes	Yes
STEWART-DAWSON	HWY.	#																
Moose Creek		349	562				1	1		5	1			Yes		Yes	Yes	Yes

(Cont'd)

TABLE 15 con't

GOVERNMENT OF YUKON

CAMPGROUND AND FACILITY INVENTORY

	# of Sites	LOCATION		FACILITIES										SIGNS				
		Mile	Kilometre	Privies	Tables	Fire Places	Kitchen	Kitchen Stove & Table	Group Fire Pit	Wood Shelters	Water Well	Floating Docks	Other	I.D. Sign	Info. Boards	Wood	Water	Regs.
STEWART-DAWSON HWY. # (Cont'd)																		
Klondike	21	435	700.1	6	34	21	1	1-2		2	2			Yes		Yes	Yes	Yes
Yukon River	82	445	716	14	85	82	1	1-4		8	1			Yes		Yes	Yes	Yes
TAGISH ROAD HWY. #6																		
Tagish Bridge	28	13	21	10	38	39	1	1-2		1	1		Boat Ramp	Yes		Yes	Yes	Yes
ATLIN ROAD HWY #7																		
Snafu Lake	4	17	26.4	2	4	4										Yes	Yes	Yes
Tarfu Lake	4	22	32.6	2	4	4										Yes	Yes	Yes
Five Finger Lookout (pull-off)		116	186.7	2	2													
Fort Selkirk				2	3		1	1										
Dragon Lk. (pull-off)		203	333.7	1									Boat Ramp					
Quiet Lk. #2		47	77.1	1			1											
Mendenhall R. #2 (slated to close)		960	1544	2			1											
Canyon Creek (pull-off)																		
Kookatsoon L. Day Use		3	4	2	6	6												

Source: Government of Yukon, Department of Renewable Resources.

TABLE 16 GOVERNMENT OF YUKON
POINT OF INTEREST SITES WITH SIGNS

1) Yukon River - Upper

*1 Anglican Church and Mission
2 Forty Mile NWMP Post
3 Forty Mile (Parts I and 2)
4 Top of the World
5 West Dawson
6 Dawson City Signs:
  - Administration Building
  - St. Pauls Church
  - Government House
  - Klondike Mines Railway
  - Ladue Mill
  - Midnight Dome
  - Miner's Rest Hotel

7 Guggieville
8 Tailing Piles
9 Goldfield Signs:
  - Bonanza Creek
  - Bonanza Townsite
  - Cheechako Hill
  - Discovery
  - Gold Bottom
  - Gold Hill
  - Hydraulic Mining
  - Klondike Dredge
  - Lowe's Fraction
  - Mining Roads
  - Monte Cristo Hill
  - White Channel

10 Yukon Ditch
11 Hunker Creek
12 Dempster Highway
13 Klondike River
14 Stewart Crossing
15 Mayo Landing
16 Minto

2) Stewart River

17 Keno Hill

3) Pelly River

18 Ross River
19 Hoole Canyon

* Numbers correspond to map and key numbers on Map Series A.

TABLE 16 (Cont'd)

4) White River

20 Chisana Gold Rush
21 Horsecamp Hill
22 White River
23 Icefield Ranges
24 Kluane Lake
25 Silver City
26 Sheep Mountain

5) Teslin River

27 Canol Road
28 Teslin
29 Great River Divide

6) Yukon River Upper

30 Yukon Crossing
31 Five Finger Rapids
32 Robert Campbell Highway
33 Carmacks
34 Montague House
35 Conglomerates
36 S.S. Evelyn
37 Hootalinqua Island Shipyard
38 Dominion Telegraph Line
39 Lower Laberge
40 Lake Laberge
41 Hootalinqua
42 Big Salmon NWMP Post
43 Canol Pipeline Bridge
44 Lapie River Canyon
45 Old Dawson Trail
46 Burn Area
47 Whitehorse Copper Belt
48 135th Meridian
49 Whitehorse Area Sign: Canyon City
  Miles Canyon Viewpoints
  Schwatka Lake
50 Yukon River
51 Robinson
52 Emerald Lake
53 Carcross Desert
54 Carcross Cemetary
55 Bove Island
56 Venus Mine

Source: Government of Yukon, Department of Tourism, Recreation and Culture.

TABLE 17 PRIVATELY OWNED CAMPGROUNDS IN THE YUKON RIVER BASIN

PRIVATE CAMPGROUNDS	KM	NO. OF CAMPSITES
Alaska Highway		
1) Teri-Tori	1281	8 + sites
2) Halsteads	1296.8	8 + unlimited unserviced sites
3) Johnston's Crossing Campground	1347	15
4) Lakeview Resort/Marina	1414	35 boat launch
5) Sourdough Tourist Campground	1454.5	100
6) Golden Horn	1454.8	36
7) Pioneer Trailer Park	1465.7	95
8) Mackintosh Lodge	1644	13 + unlimited unserviced sites
9) Kluane Lake Lodge	1699	8
10) Cottonwood Park	1717	20
11) Kluane Wild. Village	1798	59
12) Pine Valley Motel	1845	19
13) Koidern River Fishing Lodge	1873	10
14) White River Lodge	1881	15
Klondike Highway		
15) Spirit Lake Lodge	116	12
16) Takhini Hot Springs	198	?
17) Midway Lodge	424	4
18) Klondike Gold Campground	Dawson	?

Source: Yukon Travel Guide, 1983.

TABLE 18 HIGHWAY LODGES OUTSIDE OF COMMUNITIES

Halsteads	km 1297 Alaska Highway
Jakes Corner	km 1392 Alaska Highway
Lakeview Resort and Marina	km 1414 Alaska Highway
MacKintosh Lodge	km 1644 Alaska Highway
Kluane Lake Lodge	km 1699 Alaska Highway
Bayshore Motel	km 1712 Alaska Highway
Cottonwood Park	km 1717 Alaska Highway
Kluane Wilderness Village	km 1798 Alaska Highway
Pine Valley Motel	km 1846 Alaska Highway
Koidern River Fishing Lodge	km 1873 Alaska Highway
Koidern Gulf Services	km 1876 Alaska Highway
White River Lodge	km 1881 Alaska Highway
Spirit Lake Lodge	km 116 Klondike Highway
Takhini Hot Springs	km 198 Klondike Highway
Braeburn Lodge	km 281 Klondike Highway
Midway Lodge	km 424 Klondike Highway
Stewart Crossing Lodge	km 537 Klondike Highway
Moose Creek Lodge	km 562 Klondike Highway
Klondike River Lodge	km 678 Klondike Highway
Little Salmon Lodge	km 470 Robert Campbell Highway

Source: Yukon Travel Guide, 1983

III) Boating

Appendix V, A Summary of Craft Related Water-Based Recreation in the Basin, (Vol. III) discusses current and potential water craft use on lakes and rivers.

Canoeing and whitewater boating, discussed in detail in Appendix V, are popular recreational activities for residents and tourists. Increasing trends in canoe sales and rentals to residents, rentals to tourists, and interest in guided and non-guided canoe trips by tourists and tourism promoters, suggests that canoeing will be an increasingly popular activity in the Basin. The Yukon Voyageurs and Canoe Club, in its presentation to the Placer Mining Guidelines Public Review Committee, stressed the importance of a "wilderness environment" to resident and tourist canoeists. The club has prepared a preliminary list of rivers in the Territory, which ranks their importance for recreational canoeing, and is also in the process of preparing detailed river guides for canoeists, paddlers and kayakers. The tourism potential of canoeing in the Basin is discussed in more detail in the Tourism chapter of this report.

Sailing and power boating are primarily resident activities enjoyed by some Yukoners. Sailing is not very popular because of high investment costs and limited suitable waterbodies. Power boats are used primarily by hunters and fishermen, and by some resident recreationists on larger, accessible lakes during the summer. Most of the larger lakes in the Basin are subject to sudden winds or storms which can make water craft recreation on them hazardous. Power boat use is restricted by access, water depth, and the increasing cost of fuel, however, as roadside hunting success declines, power boats are being used increasingly to get into less accessible areas.

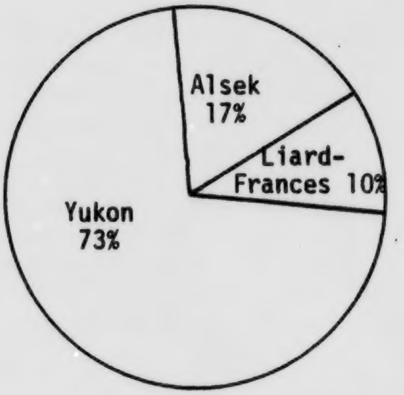
IV) Sport Fishing

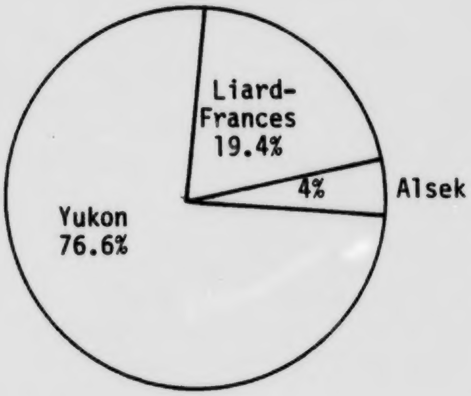
Sport fishing is an important outdoor recreational activity for Yukon residents and visitors in the Basin. Yukon's sport fishery has been studied in detail in a 1981 report entitled "The Yukon Sport Fishery, A Policy Oriented Assessment of Sport Fishing in Yukon. Main Report and Summary" (Howard Paish and Assoc. Ltd., (H.P. & A), 1981). Most of the discussion, conclusions and recommendations presented in the Paish study are applicable today, and relatively little new information on Yukon's sport fishery, apart from some creel census' and productivity estimates, is available. Useable information on the sport fishery in the B.C. portion of the Basin was not available for this study, however, some site specific data for particular lakes and streams and general angler information at a regional level, is available from the B.C. Ministry of the Environment. This chapter will review and summarize the Howard Paish and Associate studies, incorporating new information where it applies.

The Paish studies covered Yukon south of the 64th parallel, however, most sport fishing in the Territory occurs within the Yukon River Basin. For example, about 75% of the lakes and most of the rivers studied are within the Basin and if angling activity could be related directly to the proportion of water bodies in the Basin, about 75% of all unguided resident and visitor angling activity would occur there. However, taking into account that most of the readily accessible and actively used lakes and rivers are within easy access of Whitehorse and major transportation routes, 75% is probably a very conservative estimate of the actual proportion of angling activity that occurs in the Basin. In addition, almost 90% of all commercially guided and lodge related sport fishing occurs in the Basin.

The following quote from the Paish Study summarizes Yukon's sport fishery to 1981. The rest of the chapter will discuss in more detail sections relevant to water based recreation and tourism.

> "Sport fishing is important to Yukoners and to the Yukon tourism industry. In 1980 sport fishing in Yukon provided some 170,000 man days of angling for almost 20,000 resident and visitor anglers.
>
> These anglers caught and kept about 235,000 fish weighing a total of over 1/2 million pounds (227,000 kilograms). In numbers, 50% would be Arctic grayling and by weight 80% would be lake trout. The retail value of the fish caught would be about $1 million.
>
> The angling took place on some 277 lakes, about 1/3 of which are accessible by some form of road, including 4-wheel drive. The remainder are only accessible by air, or by trail in a few instances. Angling also took place along some 6,000 miles (10,000 kilometres) of rivers and streams that are accessible, in part, from these roads.


ROAD ACCESS LAKES


NON-ROAD ACCESS LAKES

About 8,500 visitors bought angling licenses in 1980. 568 of them came to Yukon in 1980 specifically for an angling holiday at 6 major sport fish lodge operations. Between them they fished for a total of about 3,300 days (2% of the total) and caught and kept about 16,500 pounds (7,500 kilograms) of fish (2.8% of the total catch), an average of less than 30 pounds each. These anglers paid a total of $540,000 directly to lodge operations, almost 18% of the total estimated direct revenue from sport fishing.

A 1977 survey of Yukoners' outdoor recreational activity shows that 70% of the population fish at some time during the year, well ahead of such popular activities as camping, hunting, recreational boating, cross-country skiing and snowmobiling.

These 'numbers' on anglers and their fishing activities are based, in part, on a 1975 survey of Yukon sport fishermen. They have been updated to reflect the growth in licence sales since that time.

The numbers speak for themselves. Sport fishing is an important outdoor recreation activity for Yukoners and visitors to the Territory.

The more important numbers, perhaps, are those that show the growth in the use of the Yukon sport fishery over the past 20 years. In 1960, just under 6,000 licences were sold in the Territory. By 1970 that number had almost doubled to 10,500. By 1980 total licence sales were almost at 17,000. If we add the young anglers who do not need a licence, we have our total of 20,000 active anglers.

The numbers that have not changed, however, are the fixed number of 277 lakes and 6,000 miles (10,000 kilometres) of river and streams. Those aquatic ecosystems and their capacity to produce fish have remained unchanged, while anglers using them have more than tripled during the past 20 years - the lifespan of a lake trout.

In spite of this increasing user pressure, there has been no sharply noticeable change in sport fishing quality. Generally, fishing has been excellent by any standards, and, with a few very noticeable exceptions, anglers have been able to enjoy their sport with very few obvious signs of pressure on fish stocks, except at the most easily accessible lakes.

Experienced resident anglers have gradually become more skillful and more mobile. This, in part, probably masks the fact that fish have become harder to catch, and most anglers agree that fishing is not as good as it used to be."

(Source: Howard Paish & Associates Ltd., 1981.)

A) The Resource Base

The sport fishery resource base includes the lakes, rivers, and fish species used by recreational anglers. The biological and habitat components of the sport fishery have been discussed in detail elsewhere, (H.P. & A, 1981).

The charts on page 106 and Map Series D (Vol. II) illustrate the distribution of lakes and rivers in the Basin. In the Yukon portion of the Basin, there are about 180 lakes over 200 ha, 33% of which have road access, and account for about 70% of total lake area. The large lakes in the B.C. portion of the Basin, which are not included in these figures, support about 80% of sport fishing activity in the Atlin-Taku area. Resident Yukon anglers prefer lake fishing, account for most of the angling pressure and catch most of the fish, while non-resident tourists prefer fishing in roadside rivers and streams. Access plays a key role in lake and stream sport fisheries; a single access point to a lake can result in total use of the lake fishery, while access to a stream usually results in fishing pressure only near the access point (H.P.& A., 1981). The lake fishery has been identified as the area requiring immediate and intensive management, and to date, has been studied in more detail than the river and stream sport fishery.

As Charts 6 and 7 illustrate, lake trout, Arctic grayling and pike are the most popular sport fish. Arctic grayling account for the greatest number of fish caught, while lake trout, the most desired species by Yukon resident anglers, account for about 80% of the catch by weight. Pike, and to a lesser extent, salmon, dolly varden and other species account for the remainder of the catch.

On the average, Yukon lakes are much less productive than lakes of comparable size in south central B.C. The fish living in Yukon lakes

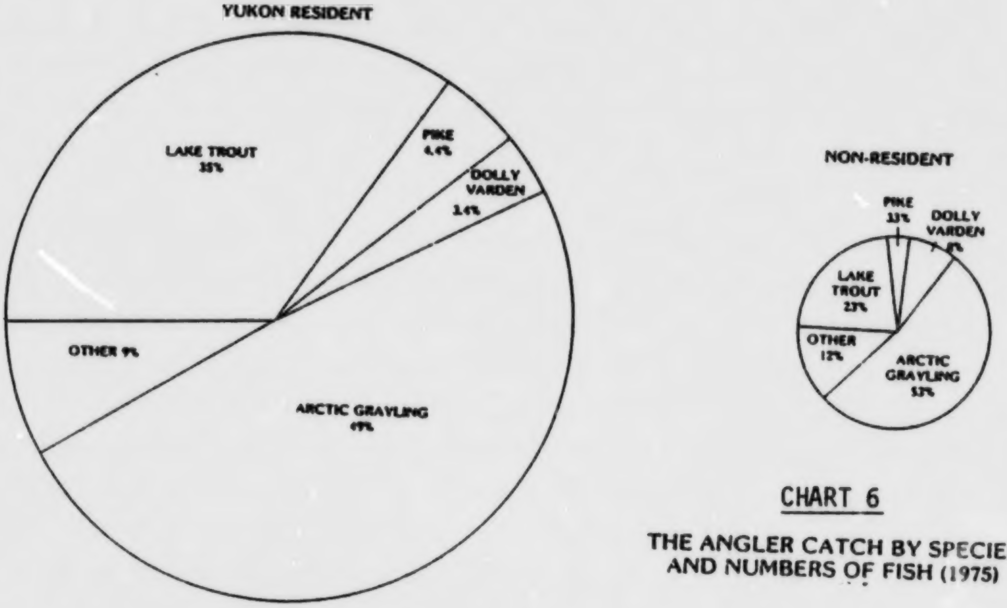
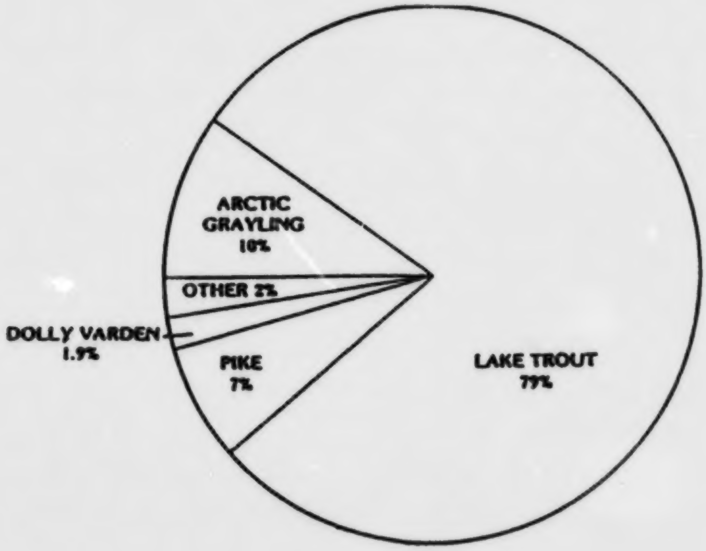


CHART 6

THE ANGLER CATCH BY SPECIES
AND NUMBERS OF FISH (1975)



EXCLUDES SALMON AND CHAR

INLAND FISHERY ONLY

CHART 7

ESTIMATED ANGLER CATCH BY WEIGHT (1975)

Source: H.P. & A., 1981

grow, mature and reproduce very slowly: for example, lake trout do not mature until they are 8 to 10 years old, and may only spawn once every two or three years after that. It is possible that Yukon anglers are already overharvesting fish populations in some lakes. Gradual declines in size and numbers of fish caught are evident in the accessible larger southern lakes, however, experienced anglers have compensated for this decline by switching to more remote lakes and increasing their fishing skills. However, "most anglers agree that fishing is not as good as it used to be" (H.P.& A., 1981).

In response to identified data gaps in productivity information for individual lakes, combined with an increase in angling pressure and demand for leases for fly-in sport fishing operations on remote lakes, the Department of Indian and Northern Affairs (at the request of YTG and Department of Fisheries and Oceans) placed a moratorium on the granting of land leases for sport fishing operations in 1980. Department of Fisheries and Oceans has since conducted studies to collect productivity information on 65 lakes in the Territory, most of which are in the Basin (Map Series D, Vol. II). Most are fly-in lakes, however, several road and 4-wheel drive access lakes near Whitehorse and along major transportation routes were also studied.

More detailed productivity information can be found in "Estimating Fish Yield on Select Yukon Lakes Using the Morphoedaphic Index" (Government of Canada, Department of Fisheries and Oceans, 1982). In summary, the data collected allowed managers to calculate the total fish yield of the lakes studied and from this estimate, quotas for lake trout harvest for resident and non-resident anglers were estimated. The methodology, data, and proposed preliminary management guidelines from this study are summarized in Appendix VI (Vol. III), "Proposed Management Strategy for Yukon Lakes".

Productivity studies have given fisheries managers valuable information on the resource base for some lakes in the Basin, and have indi-

indicated that overfishing in most of these lakes is not a problem yet. However, since necessary, complementary demand and use information is far from complete, comprehensive management using adequate resource supply, use and demand information is not possible. There is no management system in place for integrating sport, commercial, domestic and native fisheries in the large, accessible lakes in southern Yukon and the B.C. portion of the Basin, and very little information on the resource and its users, on which to base such a system. Creel census information which has been collected for some of the larger lakes during the last few years had not been anlayzed at the time of writing.

Fish Stocking

Fish stocking programmes began with private efforts in 1946, and since 1961, when the Department of Fisheries and Oceans became involved, over 400,000 coho and rainbow fry have been stocked. Stocking efforts are concentrated in land locked lakes near Whitehorse and other communities, and account for at least 3% of fish caught by anglers in the Basin (H.P.& A., 1981). The stocking programmes carried out so far have for the most part, been successful, and there has been some public pressure to increase and expand the stocking programme to include new lakes and native species. However, native sport fish - lake trout, pike and Arctic grayling - are not well suited for aquaculture and stocking methods, and the cost of raising native species fry in large numbers would probably be prohibitive.

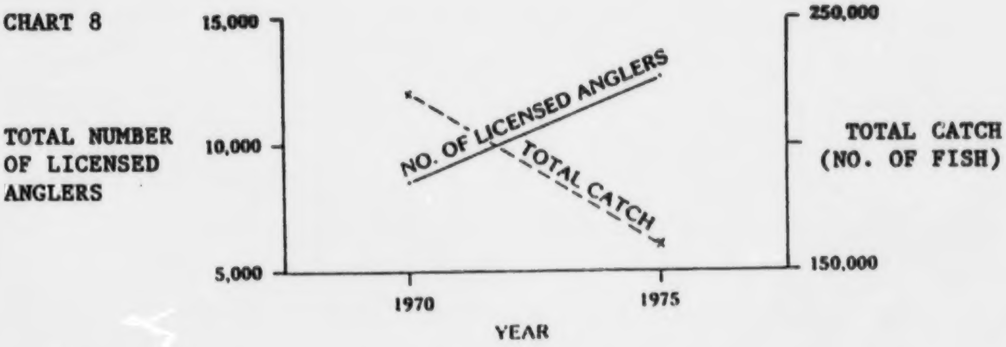
Stocking programmes are best suited to providing new angling opportunities in areas of high demand, or where native fisheries do not exist. They can also serve to re-distribute angling pressure in areas where native stocks are over fished. Stocking programmes cannot replace native wild stock management in the Basin, and should be viewed as a complementary, not a replacement programme to overall management.

A detailed discussion of the methods and limitation of stocking programmes in the Basin can be found in the Paish Report.

B) **Resource Users**

"Resource users" refer to casual and serious Yukon resident and non-resident (Canadian and foreign) anglers who sport fish in the Basin. There has been a steady increase in the number of anglers in the Basin over the last twenty years, and as Chart 8 shows, a general decrease in their total catch. However, apart from a few general observations and several outdated studies, there is very little information on the Yukon angler. Most of what is known is discussed in detail in the Paish Report and will be briefly summarized in this section.

CHART 8



A COMPARISON OF ANGLER EFFORT AND FISH CATCH
(1970 - 1975)

Source: Howard Paish and Associates, 1981.

The number of licenced anglers doubled from 1960 to 1970, and doubled again from 1970 to 1980. About half of the licences sold were to non-Yukoners. Since 1980, the sale of resident licences has not risen significantly and the sale of long term non-resident licenses dropped by over 400 from 1980 to 1982.

A 1975 survey of Yukon anglers indicated that most non-residents fished for a variety of species along accessible streams and lakes, for an average of 6 days a year, catching 25% of the total sport fish harvest. Yukon residents fished about 19 days a year, preferred lake trout, and caught about 75% of the total sport fish catch. Residents also preferred lake fishing. Paish estimated that the average resident angler catches and keeps more fish in one day than the non-resident catches and keeps in a season. However, there is very little useful information available on the Yukon resident angler. Most information is tourist-oriented, and includes age, sex, origin and number of days fished, but very little on where the angler fished, why, and how much time was spent fishing on specific water bodies or for specific species.

Yukon anglers can be grouped into three categories:

1) **The casual resident and non-resident angler** who combines fishing with other recreational pursuits such as canoeing, picnicing, cottaging and touring. Much of their angling is carried out on accessible streams near major roads. Angling is an important but not primary component of their recreation, and their catch and kill rate is quite low. Paish concluded that casual anglers do not put a lot of pressure on the fishery and can be adequately managed with current licensing.

2) **The serious Yukon resident angler** makes the most harvest demands on Yukon's sport fishery. Angling is a very important part of the Yukon lifestyle; a 1976 study of resident recreation found that

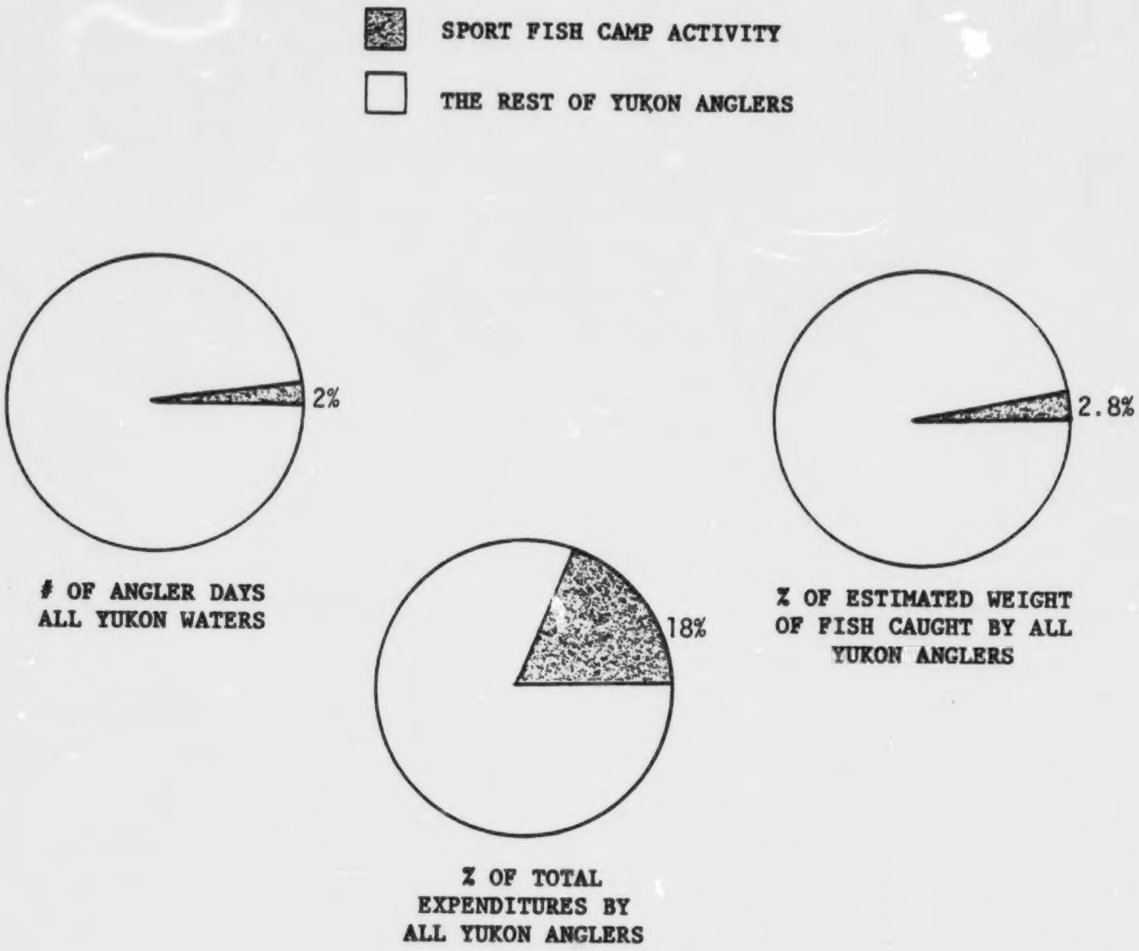
70% of Yukoners participated in angling at least once during the summer, and one third participated at least once every two weeks (Burton, 1977).

Serious resident anglers are usually skilled fishermen, know where the good fishing spots are, spend most of their time fishing on lakes and keep a high percentage of what they catch. Also, most own boats or canoes. Little else is known about this user group in particular, where they fish, how much they fish on each lake or stream, and what and how much they catch. In 1981, Paish identified serious resident anglers as the group on which most of the management effort over the next 5 - 10 years will have to be focused. However, to date little has been done to find out more about resident anglers. The productivity studies discussed earlier took resident demand into consideration, however, the resulting management guidelines were geared more towards serious non-resident anglers. Analysed, comprehensive information from the 1980 sport fishing survey and more recent creel census data should be available in the near future.

3) **Serious Non-Resident Anglers: Commercial Sports Fishing Lodges**

The serious non-resident angler comes to the Territory specifically for a sport fishing trip, usually at a lodge. About 90% of all sport fishing lodge activity in the Yukon occurs in the Basin. These anglers are usually experienced fishermen interested in a remote, high quality angling holiday. As Chart 9 indicates, they catch and keep less than 3% of the total sport fish harvest in the Territory, and account for 18% of total expenditures by all Yukon anglers. Their activities rarely conflict with other angler groups because of the remoteness of the areas in which they fish, however, as identified in the Paish report, a drastic increase in sport fishing lodge activity could have the potential to put serious pressure on specific lakes where productivity and its capability to support additional pressure is unknown.

CHART 9 SPORT FISHING CAMP ACTIVITY IN YUKON 1980



Source: Howard Paish and Associates, 1981.

TABLE 19: COMMERCIAL SPORT FISHING ACTIVITY IN THE YUKON PORTION OF THE BASIN

Land and Basin	Current Commercial Sport Fishing Activity	Land Lease Granted in '83
Upper Yukon Sub Basin		
Chain Lake		
Long Lake	Fly-in	X
Gladstone Lakes	Fly-in	
Clair Lake	Fly-in	X
Frank Lake	Fly-in	X
37 Mile Lake	Fly-in	
Coghlan Lake	Fly-in	
Jo-Jo Lake	Fly-in	
Tagish Lake	Guided Fishing	
Quiet Lake		
Mandanna Lake		X
Morraine Lake		
Aligator Lake		
Michie Lake		
Snafu Lake		
Little Salmon Lake	Roadside Lodge on Lake	
White River Sub-Basin		
Wellsley Lake	Fly-in Lodge on Lake	
Gladstone Lakes	Fly-in	
Dog Pack Lake	Fly-in	
Tincup Lake	Fly-in	
Kluane Lake	Several Advertised Fishing Guides	
Koidern River	Fishing Lodge near River	
Pelly River Sub-Basin		
Pelly Lake	Fly-in	X
Fortin Lake	Fly-in	X
Big Kalzaz Lake	Possibly Fly-in Use	
Tadru Lake	Fly-in	
Tatlemain Lake	Fly-in	
Ess Lake	Fly-in	
Stokes Lake	Fly-in	X
Earn Lake	Fly-in	X
Moose Lake	Fly-in	X
Stewart River Sub-Basin		
Fairweather Lake		X

TABLE 19: COMMERCIAL SPORT FISHING ACTIVITY IN THE YUKON PORTION OF THE BASIN (Cont'd)

Land and Basin	Current Commercial Sport Fishing Activity	Land Lease Granted in '83
Teslin River Sub-Basin		
Wolf Lake	Fly-in Lodge on Lake	
Teenah Lake	Fly-in Lodge on Lake	
Teslin Lake	Guided Fishing	
Fish Lake	Fly-in	
Dalayee	Fly-in	

Fly-in Use denotes occasional or regular use.

Source: Department of Fisheries and Oceans, Whitehorse

In 1982 there were three established fly-in sport fishing lodge or camp operations in the Basin; Kluane Wilderness Lodges, which accounted for about 85% of all fly-in sport fishing lodge activity in the Territory, Wolf Lake Lodge and Peacock's Fly-in Fishing. Roadside lodges and guides cater more to traveling tourists who decide to take a day or so of guided fishing once they are in the Territory. The Paish report discusses the fly-in fishing lodge business in detail, including current and potential operations, problems, and potential conflicts with other resource users.

By late 1983, the Department of Fisheries and Oceans had estimated allowable commercial and resident sport fishing harvests for 65 lakes in the Territory, including 35 lakes for which applications for land leases for the purposes of fly-in sport fishing operations had been received. The applications were reviewed by the Federal-Territorial Lands Advisory Committee (FTLAC) and with Fisheries approval, 10 land leases for fly-in sport fishing camps in the Basin were granted (Table 19). However, a formal management plan for fly-in sport fishing operations is not yet in place.

The granting of land leases and guide licences allow an operator to guide on a lake and harvest a set amount of fish. The operator is responsible for the commercial viability of the operation based on the allowable quota and other stipulations in the land lease and fishing guide licence. It is too soon to tell how successful the new and expanded operations will be, but they may have the potential to become an increasingly important component of tourism and resident recreation in the Basin.

C) The Economic Value of the Basin's Sport Fishery

There has been no recent comprehensive evaluation of the economic value of the Basin's sport fishery, however, several estimates have been made. Paish estimated that anglers spent a total of about $6.2 million in 1981, including about $3.0 million in direct fishing expeditions and $3.2 million in indirect expenditures for boats, motors, campers, special vehicles and other items related to fishing activities (H.P.& A., 1981).

In 1983, the Fisheries Work Group of the Yukon River Basin Study estimated the value of the Basin's sport fishery to be about $4 million. However, this estimate did not include sport fishing expenditures of Yukon residents, on the basis that such expenditures originate in and are returned to the Yukon economy and therefore do not represent a 'net' economic value.

D) The Future of the Basin's Sport Fishery

Most of the conclusions and recommendations presented in the 1981 Paish study, and summarized in Appendix VII (Vol. III) of this report still apply today. The productivity studies completed so far represent an initial step in collecting information on the resource base, however, little has been done in the way of collecting necessary, complementary information on the resource user, especially the serious Yukon resident angler. Initial steps towards managing the serious non-resident angler have been taken, and this also represents a step towards managing the resource for all users. However, there is not enough basic resource and user data available on which to base a preliminary sport fishery management plan, and it does not appear to be a priority with the Department of Fisheries and Oceans, the agency responsible for managing the resource. The Paish report recommended that responsibility for the sport fishery be transferred to Government of Yukon by 1985. Discussions between the two governments have been going on for several years, however, there is no indication as to when the transfer might take place.

The sport fishery is an important component of outdoor recreation in the Basin for residents and tourists, however, in Yukon, there is no systematic method for incorporating the sport fishery into tourism and recreation planning. For example, available productivity information could be used in campground planning, potential park plans, identifying potential tourism destination features and attractions, and estimating the capability of a lake to support proposed recreational and/or tourist use. The creation of recreation and tourist attractions near water will probably serve to attract and concentrate angling activities in that area. This applies not only to angling-oriented opportunities such as sport fishing camps, but to any water related activity such as the CHRS proposal for the 30 mile section of the Yukon River and the proposed tour boat from Dawson to Eagle, Alaska. Tourist questionnaires could include questions related to visitors' sport fishing activities, success and satisfaction or dissatisfaction.

Such information would be valuable in developing more realistic promotion of the Basin's fishery for highway and wilderness travelers. Much of the current promotional literature tends to focus on "catching the big fish" rather than promoting the quality and variety of available angling opportunities.

The points discussed above illustrate the main problems concerning Yukon's sport fishery:

a) the lack of a comprehensive policy and system for managing Yukon's sport fishery.

b) little coordination between the various government agencies responsible for recreation, tourism and parks and the agency managing the sport fishery.

Sport fishery management to date has been, for the most part, ad hoc and reactive, and has taken second place to salmon management. The sport fishery is a vital component of water-based recreation and tourism in the Basin, and in Yukon there is still the opportunity to develop and manage this resource in a way which can benefit Yukoners and tourists alike. However, it is important that such comprehensive management begins soon before the opportunity is lost.

V) Wildlife

Wildlife is an important component of outdoor recreation and lifestyles in the Basin. A 1977 study of resident recreation indicated that hunting was one of the most popular recreation activities in Yukon, ranking ahead of canoeing and boating in participation rates (Burton, 1978). Meat hunting is particularly important for Yukon residents. Yukon guide outfitters guided over 400 hunters in 1981, providing seasonal employment for 160 - 170 people in the Territory. Although very little information is known about non-consumptive uses of wildlife such as viewing and photography, it is frequently included in promotional tourism literature for the Yukon. No information is known on the non-consumptive value of wildlife to Yukon residents.

The Government of Yukon is responsible for wildlife management in the Territory. The Wildlife Branch's overall objective "is to manage game species to provide for their contined existence while allowing for harvest at an optimum sustained field level or a low level, depending on the social benefit sought" (Government of Yukon, Department of Renewable Resources, 1982). Achieving this objective has been difficult, because although the Territorial Government has jurisdiction over wildlife, the Federal Government retains control of wildlife habitat. Also, the Territorial Government has no control over native hunting.

Because of these restrictions, the Branch has had to rely on manipulating and restricting hunting licences and seasons in order to achieve its management objectives and, for the most part, this is still the case today.

The discussion in this chapter will concentrate on water related recreation aspects of wildlife excluding trapping and subsistence hunting. Interviews with biologists from the Yukon Government's Wildlife Management Branch, have provided most of the data used. More detailed biological and habitat information is available from Government of Yukon, Wildlife Management Branch, Province of B.C. Ministry of the Environment, Fish and Wildlife Branch, and from the Canadian Wildlife Service.

A) Demand

Information on recreational use and demand of wildlife in the Yukon portion of the Basin is, for the most part, limited to resident and non-resident hunting licence and harvest statistics, which are summarized in Tables 20 and 21. Available resident and non-resident harvest statistics for the B.C. portion of the Basin have been collected only at a regional scale including areas outside of the Basin, and therefore are not useful. Species-specific demand information is discussed in more detail in subsequent sections of this chapter.

Recent information on non-consumptive uses of wildlife in the Basin is practically non-existent. The opportunity to view, photograph and study wildlife is assumed to be an important component of tourism in the Basin, and is mentioned frequently in promotional material. However, preliminary surveys indicate that highway travelers in particular, are not satisfied with actual wildlife viewing opportunities which they were led to believe existed. Tourist questionnaires do not specifically address the value or importance of non-consumptive uses of wildlife to visitors, or how important wildlife viewing opportunities are in the decision to come to Yukon. These questions need to be answered and coordinated with actual non-consumptive wildlife use opportunities in the Basin, in order to effectively and realistically promote and use wildlife resources for tourism.

No data exists on the non-consumptive value of wildlife to Yukon residents. Such values would include the same opportunities available to visitors plus the importance of simply knowing that wildlife exists and is part of a "Yukon Lifestyle".

Table 20: Big game harvests by resident and non-resident hunters in the Yukon territory between 1974 and 1980.

res=by resident hunters non=by non-resident hunters tot=total by all hunters and N/A=not available

	Big game harvest* by hunting season																				
	1974-75			1975-76			1976-77			1977-78			1978-79			1979-80			1980-81		
Species	res	non	tot	res	non	tot	res	non	tot	res	non	tot	res	non	tot	res	non	tot	res	non	tot
Mountain Sheep	59	235	294	53	192	245	50	197	247	76	199	375	91	233	324	73	213	286	58	184	242
Moose	1160	189	1349	870	150	1020	960	142	1102	1020	177	1197	740	196	936	930	177	1107	856	153	1009
Grizzly Bear	24	86	110	10	75	85	17	63	80	25	71	96	19	71	90	32	52	84	22	45	67
Caribou	340	173	513	240	140	380	430	130	560	210	160	370	155	186	341	420	161	581	249	146	395
Mountain Goat	10	20	30	8	16	24	7	8	15	10	23	33	5	12	17	7	11	18	5	8	13
Black Bear	71	8	79	35	8	43	60	16	76	100	12	112	50	10	60	16	20	36	58	15	73
Wolf	N/A	39	---	N/A	33	---	N/A	19	---	N/A	28	---	N/A	30	---	N/A	24	---	N/A	19	---
Wolverine	N/A	10	---	N/A	9	---	N/A	11	---	N/A	6	---	N/A	11	---	N/A	11	---	N/A	8	---
Coyote	N/A	0	---	N/A	0	---	N/A	0	---	N/A	0	---	N/A	0	---	N/A	0	---	N/A	0	---

* Harvest totals do not include harvests by trappers or status natives.

Source: Government of Yukon
Department of Renewable Resources

Table 21: Hunting Licences issued by the Yukon Wildlife Branch between 1974-1980

Licence category*	1974-75	1975-76	1976-77	1977-78	1978-79	1979-80	1980-81
	Hunting licences issued by licencing year**						
Resident Big Game***	3472	3465	3498	3458	3894	3608	3579
Resident over 65 Big Game	146	283	311	412	110	142	135
Indian or Eskimo Big Game					291	496	411
Resident Trapper Big Game****	99	144	143	131	115	116	116
Resident Indian trapper Big Game****	333	374	375	522	374	206	217
Duplicate Big Game	11	32	44	22	40	36	33
Non-resident Canadian Big Game	42	35	29	23	42	28	23
Non-resident Alien Big Game	421	351	307	401	430	443	381
Non-resident Special Big Game	N/A	N/A	N/A	N/A	N/A	N/A	13
Resident Small Game*****	76	75	152	185	220	304	277
Resident over 65 Small Game	0	0	2	1	2	1	3
Non-resident Small Game	40	57	80	86	148	129	250
Non-resident Small Game (valid licence)	N/A	N/A	N/A	N/A	N/A	46	62
Duplicate Small Game	0	0	0	0	0	5	0
TOTAL	4640	4816	4941	5241	5666	5560	5500

* Licence categories vary between years. Data are summarized by categories now in use.

** Licence year was July 1 to June 30 for 1974-75 through 1978-79. The licence year is now April 1 - March 31.

*** Big game licences authorize the hunting of big game, small game and game birds.

**** In 1979-80 General Hunting Licences which authorized trappers to hunt and trap were replaced by separate licences for each activity.

***** Small game licences now authorize the hunting of both small game and game birds. In some years game bird licences only authorized the hunting of game birds.

Source: Government of Yukon
Department of Renewable Resources

B) Economic Value of Wildlife in the Basin

Yukon guide outfitters earned about $2.5 million in 1981, and provided 160 seasonal jobs in the Territory. In addition, almost $300,000 in revenue was earned from the sale of hunting licences, seals, trophy fees, guide outfitter licences and miscellaneous wildlife-related services. No recent estimates have been made of the economic value of wildlife to resident hunters, and to resident and non-resident non-consumptive users of wildlife in the Basin. However, studies have been done elsewhere in North America and have been proposed for in the Territory.

C) Moose

Moose are extremely important to the Yukon resident hunter for meat and recreation. As a species, moose generate more recreation for resident hunters than any other species; over 2/3 of recreational hunting days spent on big game species are attributed to moose hunters, and about 90% of the total territorial moose harvest is by resident hunters. Because of their importance to resident hunters, moose are of highest priority to the Territorial Government which is responsible for their management. Moose frequently use lake and river habitat and are an important component of water related recreation.

Moose surveys were first initiated in the southern region of the Territory to determine the status of heavily hunted populations. They only cover the post-rut season from late fall to early winter, and distribution during the rest of the year remains undocumented. The studies revealed that the region supports a low density, stable population with localized overhunting in accessible areas. The studies also show an unusually high calf mortality in some areas, probably due to wolf and/or bear predation. The high calf mortality combined with an increasing demand for adults by hunters could lead to serious declines in the moose population. Studies are underway to examine the predator/prey relationships between wolf, bear and moose and more detailed information on specific populations and user pressure is available from the Territorial Government.

Access is important in managing moose populations. In some cases, increased access for hunters to moose habitat may lead to declining moose populations. On the other hand, access to new areas may serve to spread out the hunting pressure and provide additional recreational opportunities to hunters and non-consumptive users. At the present time there is no coordinating policy in place to address the question of access and its relationship to wildlife and outdoor recreation in general. This topic is discussed in more detail later in this report. Power boats and canoes are also used by resident and non-resident moose hunters, though information on the extent of this use is not yet available.

D) Caribou

Map Series D (Vol. II) shows the approximate winter ranges of woodland caribou in the Basin. For the most part, the herds do not frequent lakes and rivers during the summer months but do migrate down to frozen water bodies during the winter. Therefore, other than the odd viewing opportunity, there is little potential for water-based recreationist/caribou interaction during the summer months, although lakes and rivers may be used for access by hunters in fall.

There is very little information available on recreational use of woodland caribou, however, overall hunting pressure is believed to be low. Detailed harvest information on woodland caribou from hunter questionnaires was not available for this study, and since the statis-

tics shown in Table 20 include harvest from the Porcupine herd, they are not useful. Although there are no serious conflicts between woodland caribou and recreation yet, the potential for interaction does exist in some areas, because of the geographically discrete make-up of the herds.

E) Sheep

Map Series D (Vol. II) illustrates known populations of Dall Sheep in the Basin. Water related recreation opportunities are limited mostly to viewing opportunities from lakes and rivers near populations, including Kluane, Sekulman and Primrose lakes and sections of the Pelly River. Sheep can also be viewed from several locations along the Alaska Highway along the periphery of Kluane Park, especially in the Kluane Lake and Sheep Mountain areas.

Sheep hunting is primarily a land-based activity. Most sheep are taken by guided non-resident hunters, and are an important species to many guide outfitters in the Basin. Available statistics and studies indicate that none of the populations in the Basin are being overhunted at the present time, and that the productivity of herds does not vary significantly between hunted permit-regulated and unhunted game management subzones.

Goats

Small goat populations are found in the wet belt near the B.C./Yukon border between Kusawa River and Bennett Lake, and most water related viewing opportunities are in this region. Itsi Mountain, Harrison Lake and the 30 Mile Mountain range near Wolf River also support small populations, and isolated herds are found in the Kluane Region as well.

Goat hunting is not permitted in most of the southern and western regions of the Basin (zones 7 and 9) or in Kluane Park or Game Sanctuary. Guide outfitters are allowed to harvest one goat per year outside of restricted hunting zones, and current resident hunting pressure is light.

F) Bears

A very real potential for serious bear/recreationist conflicts exist along popular lakes and rivers in the Yukon River Basin. Black and grizzly bears frequent many of the habitats adjacent to lakes and rivers traversed by recreationists, often during the seasons of most intense recreational use. Serious bear/human conflicts have not been common in the Basin despite the fact river and lake recreationists frequently encounter bears. Many people are unaware of how to act around these potentially dangerous animals.

The increasing recreational use of lakes and rivers by tourists and residents may lead to an increase in bear/recreationist contact and potential conflict. The Government of Yukon Wildlife Management Branch has published several booklets and articles aimed at educating the public about bears, however, the public relations aspect requires higher profile. For example, although most wilderness guides are well aware of potential bear hazards and instruct their clients accordingly, it is not known whether agencies such as canoe rental companies inform their clients of potential problems and avoidance areas. In a recent study of bear/human interactions along the Yukon River, Henderson (1983) stated that although canoeists were aware that bears inhabited area they were traversing, some were not taking necessary precautions in handling their food and garbage thereby creating a potentially dangerous situation for themselves. Although bear problems can occur almost anywhere in the Basin~~,~~ several areas and situations have been identified which are of particular concern:

1. Conflicts between bears and recreationists may occur along many lakes and rivers. Most conflicts occur from late July to mid-September coinciding with the chum and chinook salmon spawning runs. Any spawning grounds pose a serious potential threat to hikers and canoeists (Map Series D, Vol. II). A few identified sites include Frenchman-Tatchun Lakes, the west end of Kluane Lake, Earn Lake, Yukon River north of Dawson, north Klondike River and the stretch of 40 Mile River to Alaska (Henderson, 1983).

2. Recreationists camping in or near cleared areas used by commerical and domestic fishermen are a problem along several rivers in the Basin. Bears are attracted by strong odours whether they be fish remains or cooking odours, and campers are often unaware of the potentially dangerous situation they are creating.

3. The location, availability and use of primitive camping areas along some of the more popular recreational rivers in the Basin may lead to bear/recreationist conflicts. Campsites along popular routes are typically near inlet streams where clear creek water improves fishing, and since the availability of these areas is restricted, they are heavily used. Y.T.G. Parks and Wildlife Services and commercial canoe trip operators report that the most popular campsites are unkempt. One operator regards them more as "pigsties" rather than campsites. The only maintained river campgrounds are along the Yukon River upstream of Fort Selkirk, and although these particular sites are maintained on an ad hoc basis during the summer, no agency has been designated the mandate for developing and maintaining wilderness campsites.

   To date, Government of Yukon has not been involved in developing primitive campsites along rivers mainly because of the logistics involved in their maintenance. This policy must change in the near future with respect to the steadily increasing recreational use of lakes and rivers currently promoted by Tourism Yukon as well as private business.

4. Remote and highway lodges with self maintained garbage dumps experience frequent bear problems, if refuse is handled in a manner that leaves it accessible to bears. A particular concern is that several lodge owners find spoiled "tame" bears attractive to their clients and therefore good for business. This dangerous situation could have a particular negative impact on local tourism if a serious incident were to occur.

5. Ignorance of bear behaviour and habitat by recreationists can create problems. Improper handling of food and garbage, camping in areas frequented by bears, and berry picking in bear habitat can all lead to bear/human confrontations in the Basin.

The Yukon River downstream of Dawson has particular potential for bear/human conflict. The river is used by commercial and domestic fishermen from July to September and is popular with river travelers during that season. Bears frequent camps in the area, and conflict and confrontation has already occurred at several sites. Private enterprise is currently planning a tour boat operation to run from Eagle, Alaska to Dawson, Yukon starting in 1984. This may be an advertised service and could be very attractive to canoeists who wish to extend their Yukon River trip, and to those who want to take a one or two day trip down the river from Dawson to Eagle, and use the tour boat for the return trip up river.

The 30 mile section of the Yukon River from Lower Laberge to Hootalinqua also has potential for increased recreational use related to proposed Canadian Heritage River System status. The earlier discussion on wilderness campsites applies especially to the Yukon River, with its current bear problems and potential for increased use.

Potential bear/recreationist problems exist along many other lakes and rivers in the Basin which are used by fishermen, canoeists and bears. To date there is not enough information on bears or recreationists on these rivers to predict the level of potential conflict. The studies which have been done strongly recommend immediate recreationist education programmes and more direct government involvement in bear/recreationist management programmes (Henderson, 1983; Crombie, 1983).

Bear hunting is primarily a land-based activity in mountainous settings, with grizzlies being an important species for guide outfitters. In the 1960's and 70's approximately three times as many grizzly bears were shot by non-residents as compared to residents. Guide outfitters have operated under a restricted quota system for grizzlies since 1980 and now grizzly bear harvest has equalized between non-residents and residents. Black bears are generally shot as problem animals or for pelt or meat purposes, therefore the numbers taken by residents are, on the average, much higher than those taken by non-residents.

Increased bear/recreationist contact may lead to an increase in "lethal control". Bear populations along some rivers and lakes may decrease, or those populations recovering may never increase. The viewing potential along these recreational waterways may be lost.

G) Raptors and Waterfowl

Map Series D (Vol. II) illustrates some identified, important, water related raptor, and waterfowl areas in the Basin. Although population, biological and habitat information has been collected for some areas and species, there is very little information on their recreational use, demand and importance in the Basin.

Peregrine falcons, bald eagles and osprey all use lake and river habitat and are often seen by water recreationists in some areas of the Basin.

The re-establishment of peregrines in the Yukon has been an ongoing project of the Yukon Government since the mid 1970's. Peregrines have been successfully re-introduced along the Yukon River mainstem, and will probably expand their habitat south to Fort Selkirk during the next few years. Efforts are continuing to introduce peregrines to other areas in the southern Yukon. Peregrines are considered rare and endangered in Canada and, at an international level, are considered to have a very high aesthetic value among recreationists. They are also valuable for falconry, and have been the target of poaching in the Basin. Deliberate or accidental disturbance of raptor nests by recreationists poses one of the most serious threats to peregrines along the Yukon River, and such disturbances may increase with potential increased use. Because raptors nest close to the water it is dificult to prevent falcon/recreationist interaction, however, river travelers should be made aware of the importance of not disturbing the nests. It may be necessary to assign a conversation/interpretation officer to the corridor during the summer months, if nest disturbance becomes a problem.

Important waterfowl areas in the Basin are illustrated on Map Series D (Vol. II). Detailed biological studies are being carried out in the Nisutlin Delta area as part of the Yukon River Basin Study and site-by-site descriptions of other identified areas can be found in "Some Important Migratory Bird Habitat in the Yukon Territory" (Government of Canada, Canadian Wildlife Service, n.d.). Table 22 summarizes the importance of these identified areas. However, there is very little information on the consumptive and non-consumptive value of waterfowl other than general harvest and hunting licence statistics and statements on seasonal disturbance of migrating birds by motorboats and recreational vehicles on or near some of the larger southern lakes which are frequently used by recreationists.

TABLE 22: SOME IMPORTANT WATERFOWL HABITAT IN THE YUKON RIVER BASIN

Status	Area	Area Name	Waterfowl - Habitat Function*
Critical	4	Lower Nisutlin	C. Geese (Sf) Swans (Sf) Ducks (Sf)
"	9	McKlintock Bay	T. Swans (Ss) Ducks (Ss)
"	7	Tagish Narrows	T. Swans (Ss) Ducks (Ss)
Sensitive	13	Kloo-Sulphur L.	Ducks (B, M, Sf)
"	16	Pickhandle L.	Ducks (B, M) T. Swans (B?)
"	20	Lower Nordenskiold	Dabblers (B) Ducks (Ssf) Swans (S?)
"	28	Reid Lakes	Ducks (M, S, s, f,)
"	25	Von Wilczek Lakes	Ducks (M, B,)
"	10	Upper Laberge	Dabblers (Ss) Swans (Ss) Ducks (B)
"	23	Frances Lake	Ducks (Ss) Geese (Ss) Swans (Ss)
"	5	Teslin L. Outlet	Swans (Ss) Ducks (Ss)
"	6	L.Atlin L.Outlet	T. Swans (Ss) Ducks (Ss)
"	27	Willow Creek	Ducks (Ss, f)
"	14	Kluane L. Outlet	T. Swans (Ss) Swans (Ssf) Ducks (SsM) Geese (Ss)
Important	8	Bennet L. Outlet	T. Swans (Ss) Ducks (Ss)
"	22	Big Salmon-Sandy L.	Geese (Sf)
"	3	Dodo Lakes	T. Swans (B) Divers (B, M)
"	15	Lake Creek	Ducks (B, M, Sf)
"	12	Dezadeash Outlet	Ducks (Ss) Geese (Ss) Swans (Ss)
"	21	Laberge Outlet	T. Swans (Ss) Ducks (Ss)
"	19	Up. Nordenskiold	Ducks (B) Swans (Ssf)
"	31	Chappie Lake	Swans (B) Divers (B, M)
"	30	McQuesten Lake	C. Geese (B, M) Divers (B, M)
"	11	Taye Lake	Ducks, Geese, Swans (Sf?)
"	24	Sheldon Lake	Ducks (Sf) Geese (Sf) Swans (B?)
"	26	Wellesley Lake	Swans (Sf)
"	18	Hutschi Lakes	Swans, Ducks (Ss)
"	29	Horseshoe Slough	C. Geese (Sf) Ducks (Sf)

S - Staging (s-spring, f-fall)
B - Breeding
M - Molting (late summer influx)
Ducks - divers and dabblers

* Table numbers correspond to numbers on Map Series D.

Source: Some Important Migratory Bird Habitat in the Yukon Territory, n.d. Government of Canada Canadian Wildlife Service.

H) Guide Outfitting in the Basin

There are twenty active guide outfitting businesses in the Yukon, seventeen of which have all or part of their territories in the Basin. An additional six guide outfitters use the B.C. portion of the Basin (Map 3).

Most guide outfitters in Yukon offer a limited range of activities, concentrating on trophy hunting for sheep, and grizzly - the most popular species - as well as moose, caribou, black bear and mountain goat.

Guided hunters in the B.C. portion of the Basin harvest moose, goat, sheep, caribou and grizzly bear, however, available statistics do not indicate what the most sought after species are.

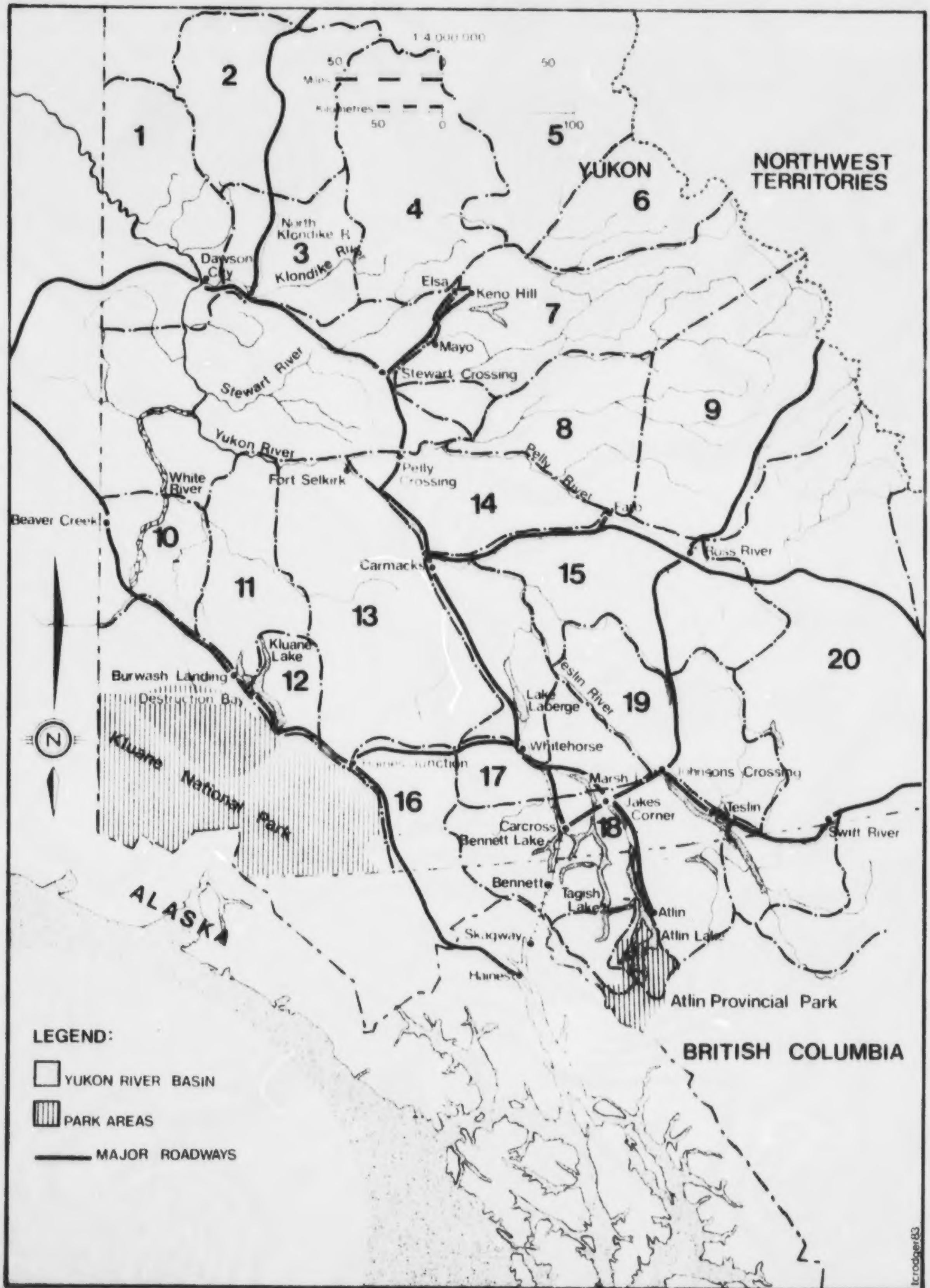
It is not known how much use guide outfitters make of lakes and rivers in their areas for hunting, however, nearly all offer sport fishing as part of their hunts, and most base and outcamps are located on lakes and rivers for access and aesthetic reasons.

In the Yukon, most guide outfitters run well established, small scale businesses operating during a short season from late summer to late fall. A few offer wilderness/adventure trips, however, for the most part, trophy hunters are their major source of revenue.

In 1980, guide outfitters in the Yukon employed about 165 people and earned approximately $2.5 million in direct revenue from the 405 tourists who purchased hunts (Thorne, Stevenson and Kellogg, 1982). Additional income was generated from hunters who spent money in the Territory before and after their hunts. Thorne, Stevenson and Kellogg suggest that a 0.6 - 0.7 multiplier would be appropriate for the overall wilderness/adventure travel industry, and if this is applied to guide outfitters revenue, the total estimated revenue from guide outfitting would be about $4 - $4.25 million.

The imposition of quotas on prime species, sheep and grizzly, along with the limited capability of trophy quality animals to support a substantial increase in harvest, has caused concern among some guide outfitters. Although the guide outfitting business appears to be stable now, in order to grow, guide outfitters may have to expand the services they offer to include non-hunting wilderness holidays. There is a conflict between general wilderness guides and guide outfitters who want to promote a wider range of wilderness activities as part of their operation, in their guide outfitting areas. This conflict will have to be resolved soon in order to avoid problems with the wilderness travel industry as a whole.

YUKON RIVER BASIN IN CANADA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NORTHWEST TERRITORIES
North Klondike R.
Klondike Riv.
Dawson City
Elsa
Keno Hill
Mayo
Stewart Crossing
Stewart River
Yukon River
White River
Fort Selkirk
Pelly Crossing
Pelly River
Faro
Ross River
Beaver Creek
Carmacks
Kluane Lake
Burwash Landing
Destruction Bay
Kluane National Park
Haines Junction
Lake Laberge
Teslin River
Whitehorse
Marsh L.
Johnsons Crossing
Jakes Corner
Teslin
Swift River
Carcross
Bennett Lake
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YUKON RIVER BASIN
PARK AREAS
MAJOR ROADWAYS
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Map:3

Guide Outfitting Areas in the Basin

Map Source: Yukon River Basin Study 1983

Information Source: YTG Dept. of Renewable Resources, 1983

VI) Recreational Cottaging

Recreational cottaging and related water-based recreational activities constitute a popular and important use of water and shoreland in the Basin. Nearly every road access lake in the Upper Yukon Sub-Basin has six or more cottages on it, and many other accessible lakes in the Basin have several recreational cottages on or near them. In most cases, recreational cottages are built on leased or owned land, acquired for the purpose of seasonal, recreational use. A 1980 potential user survey indicated that the most popular cottage related recreational activities would be, in order: fishing, skiing, power boating and pursuit of peace and quiet, or "getting away from it all" (Cottaging Bibliography). There is no information available on activities associated with existing recreational cottaging though, apart from skiing and hunting, it is mostly water-based. Information on cottaging in the B.C. portion of the Basin was not available for this study.

Seasonal and year round "cottaging" which occurs on land not designated or intended for that purpose is called squatting. For example, some placer claims are used more for recreational cottaging than for mining, and in other cases, people have simply built cottages or permanent residences on Crown lands without going through formal acquisition procedures. Since very little information is available on squatting, it will not be discussed in this section.

In the Yukon, recreational cottaging is primarily a resident activity, however, tourists and visitors may also rent or use cottages. Most cottages to date, have been constructed in planned subdivisions, on the large, accessible lakes in the Upper Yukon Basin, and are within easy access of Whitehorse (Maps A5, A6 in Vol. II, and Table 23). However, continuation of this trend is unlikely, and future cottaging will probably be geared to smaller, lower serviced developments on lakes further away from Whitehorse, and possibly associated with other "recreation destination" areas such as Kluane National Park.

The following section is a summary of a number of cottaging planning and policy documents prepared for Government of Yukon by Howard Paish and Associates (H.P.& A.) and file and interview information collected from individuals currently and recently involved in recreational cottaging in the Territory.

A) Historical Perspective

Before land claims were initiated in 1973, land for recreational cottaging was leased to individuals on an ad hoc basis; no recreational cottaging policy or planning structure was used. In 1973, a freeze on release of any land was imposed, and all individual applications had to be processed through the Office of Native Claims for approval. In 1975, the Department of Indian and Northern Affairs established a three year cottage lot development programme, with a goal of providing 120-130 cottage lots per year. The programme initially focused on infill sites on the large lakes close to Whitehorse, and the overall programme was geared towards large, serviced subdivisions. In 1977-1980, inventories of potential recreational cottaging areas were carried out, and lots in several new subdivision-type developments were released during that time. By the time the cottaging programme was transferred to the Territorial Government in 1979, "...virtually all of the easily accessible cottage lot sites in reasonably close proximity to Whitehorse; ie. within one hour's drive, had already been developed" (Cottaging Bibliography, H.P.& A., 1982).

The Department of Municipal and Community Affairs is currently completing the transfer of lots from the Federal to Territorial Government. Responsibility for future cottage lot planning and development within the Government has yet to be decided, however, regardless of which Department is assigned the mandate, coordination and cooperation between land, water, recreation, fish, wildlife and access managers will be essential.

B) Cottage Lot Demand

In 1980, Howard Paish and Associates Ltd. conducted a limited demand survey of people who were on a DINA waiting list for recreational cottage lots. The results of this questionnaire, along with results of earlier questionnaires carried out by the Whitehorse Chamber of Commerce and DINA were presented in a 1980 report entitled, "Recreational Cottage Lot Demand in Yukon, a 1980 Update" (Cottaging Bibliography). The 1980 survey did not take into account the fact that many of those questionned were unaware of the unavailability of accessible waterfront lots close to Whitehorse at a price anywhere near as low as that charged for already developed sites. Over 90% of those asked stated that their preference would be for a lakeshore lot, and most of these people preferred a lot on one of the large southern lakes close to Whitehorse. However, only about a quarter were interested in a subdivision development, and many preferred a small group or isolated lots. Over half were willing to travel more than 2 1/2 hours to a lot, if necessary, and most were prepared to pay more than the average $100 lease fee being charged at the time.

Since the completion of this survey, a couple of cottage lot subdivisions were put on the market, and the rapid sale of those lots indicated that demand was still high. There is no evidence or information available which indicates whether or not the current economic depression in the Territory has influenced cottage lot demand, since no new lots have been available since the Taku extension was released in 1981.

C) Cottaging Potential

Since the recreational cottage lot programme was transferred to the Department of Municipal and Community Affairs in 1980, the emphasis has been on the actual transfer of lots from federal to territorial jurisdiction rather than on the planning and development of new cottage lots. This situation may change in the near future since the transfer is almost complete.

In the past, cottage lot planning and development has been handled as a short term exercise, rather than as part of a long term, overall recreation development plan. Future cottage lot development will have to take several important factors into account:

1. Most of the accessible lake front cottage lots sites within a couple of hours drive of Whitehorse have already been developed. Any plans for future development of cottaging on remaining sites near Whitehorse will have to take into account other recreational uses such as day use, camping, parks and designated public recreation areas and the right of the general public to waterfront access and use.

2. Although hundreds of lakes in the Basin have been surveyed for cottaging potential, only a few of them are realistically accessible and physically suitable for cottaging development. Table 23, which lists the lakes which have been looked at in more detail, identifies less than 200 cottaging lots within reasonable access from Whitehorse: 30 of these lots are over four hours' drive away, and 20 are on remote access lakes. In addition, the land and water identified as suitable for cottaging may also be identified

as having potential for other uses including fish, wildlife, other recreation, transportation corridors, mining and hydro development.

3. Future cottage lot development will probably have to be at greater distances away from Whitehorse in order to be situated on attractive, suitable water bodies. Subdivision developments which had been popular in the past, may not be suited to smaller lakes being looked at for cottage lot development in the future. As a result, with the possible exception of potential subdivision-type developments on Lake Laberge and Teslin Lake, future cottage lot development will probably be along the line of smaller, low to minimal service developments, over 2 1/2 hours' drive from Whitehorse.

4. Development of cottage lots near to or within existing or potential tourism and recreation destination areas is another possibility. The potential for several small developments on Dezadeash Lake near Kluane Park has been addressed in a 1982 Howard Paish and Associates study (Cottaging Bibliography). Potential cottage lot sites on Kluane Lake have also been inventoried, but not yet studied. The potential also exists for the provision of remote area lots, with air, water or 4-wheel drive access and no services provided. Dalayee and Morraine Lakes have been suggested as "try out" lakes for this type of cottaging.

5. Realistic demand information will be an important component of cottage lot development in the future. The public may not be aware that the type of lots that have been provided in the past are for the most part, no longer available. Agencies responsible for cottage lot planning may have to create new and innovative cottage lot developments in order to meet public demand within existing environmental and logistic constraints.

6. Increasing recreational and other uses of lakes in the Basin indicate a need for overall lake use planning, rather than the isolated, ad hoc development that has occurred in the past. Future cottage lot development would be an important component of lake use planning.

As the cottaging bibliography, Table 23 and Map E (Vol. II) show, a considerable amount of inventory and planning work, several detailed site plans, and a number of preliminary surveys have been completed. The cottaging inventory studies provide summary and detailed site-specific biophysical and terrain suitability information for most lakes and a number of specific sites in the Basin. Based on these and earlier inventories, several of the most promising sites (Table 23) have been studied and surveyed in more detail and are discussed in a 1982 "Cottaging Update" paper prepared by Howard Paish and Associates Ltd., (Cottaging Bibliography). These sites include:

1. A serviced subdivision about four miles north of the existing Deep Creek subdivision on Lake Laberge, for which a detailed site plan has been prepared (Lombard North, 1978).

2. Development of three small sites (40 lots in total) on the east shore of Teslin Lake.

3. Remote access cottaging on Morraine and Dalayee Lakes.

Detailed planning and policy documents have also been prepared which address the overall direction for management that cottage development could take in the Territory (Paish, April 1980 and 1982). The consultants recommended a 30 month time period between site selection and lot delivery, to allow for such things as interagency referrals and approval, surveying and site development. At the present time, the sites which have been identified as having the most potential for cottaging development are at various stages in this process. For example, site plans have been prepared for Lake Laberge (although they may be outdated and require some revision); but Morraine and Dalayee Lakes have only had preliminary surveys completed. In addition, a more recent demand survey could indicate a desire for lot types which have not been studied; for example, river lots near Whitehorse.

TABLE 23 CURRENT STATUS OF COTTAGE LOTS AND POTENTIAL COTTAGE LOTS IN THE YUKON RIVER BASIN

1. A total of 930 lots have been transferred to YTG. In 1982 and 1983, the following lots and groups of lots were transferred:

Marsh Lake:	Constabulary Beach Lots 735-747; 748-776; 1-18 Judas Creek 19-34; 797-814 476; 778-786; 1000-1008 286-377; 391-399. Blocks A-2M (McLintock)
Teslin Lake S'div.	all lots
Lake Laberge	Deep Creek (2 groups) Jackfish Bay Subdivision 78-84
Fox Lake	all lots
Braeburn Lake	all lots
Little Salmon Lake	1-14
Tagish	most lots
6 Mile River of Tagish	all lots
Crag Lake	all lots

TABLE 23 CURRENT STATUS OF COTTAGE LOTS AND POTENTIAL
(Cont'd) COTTAGE LOTS IN THE YUKON RIVER BASIN

2. Site plans and surveys have been completed for the following areas, but have not been acted on to date.

Lake Laberge	Plans exist for further serviced subdivision type development (Lombard 1975).
Teslin Lake, east shore	Plans have been completed for cottage lot development.
Little Salmon	Preliminary plans and surveys for "in-fill" cottages have been done.
Little Atlin and Little Teslin Lakes	Preliminary site plans have been prepared, but have been deferred pending land claims on Little Atlin Lake and because of objections from the community of Teslin, on Little Teslin Lake.

3. The following areas have been suggested for potential cottage development in the near future. Unless noted above detailed site plans and surveys have not been prepared.

Lake Laberge	see text	
Dezadeash	10-15 lots at each of 2 sites	
Quiet Lake	25-30 lots	low serviced subdivision
Braeburn Lake	15-20 lots	
Teslin Lake	east shore - see text	
Morraine Lake	6-10 lots	remote access cottages
Dalayee Lake	5 lots	

VII) Areas of High Recreational Value and/or Potential

Lakes and rivers identified as being important for existing and potential tourism, parks and recreation are discussed in more detail elsewhere in this and accompanying studies, and are illustrated on Map Series A and B in Volume II. Appendix VIII (Vol. III) summarizes the recreational capability of sub-basins in study area. Several areas which have been discussed in more detail in other studies include:

A) Southern Lakes/Atlin
  1. Regional Use and Potential
  2. Kusawa Lake - Takhini River Valley

B) Kluane Area
  1. Kluane National Park
  2. Kluane Lake

C) Yukon River

D) Dempster Highway Corridor

A) Southern Lakes Area

1. Regional Use and Potential

The accessible lakes and rivers in the Upper Yukon and Teslin sub-basins offer the most water-based recreation opportunities in the Yukon River Basin, and because of their proximity to Whitehorse, are the most intensively used. Water-based recreation opportunities in this region have been described throughout this report, and are illustrated on Map Series B (Vol. II). There is considerable amount of biophysical and terrain data and information on services, facilities and recreational opportunities in the region, facilities and recreational opportunities in the region, but very little on demand and use, especially by residents.

Recreational use and opportunities in the Ibex Pass are described in a 1983 Resource Study (Reid Crowther and Partners Ltd., 1983). The study concluded that existing water related recreational use was low, and capability is centered around fishing, boating and cottaging on accessible lakes in the southeast portion of the area, including Louise, Franklin, Fish and Scout Lakes. The area has the potential for increased recreational use because of its proximity to Whitehorse, with access being the single most important factor in developing and managing future recreation opportunities.

The Tourism Development Plans for Atlin and Whitehorse are community-oriented and although water related recreation is not emphasized, both plans include water related developments. For example, the Whitehorse plan features waterfront development along the Yukon River, and the Atlin plan mentions the importance of Atlin Lake for current and potential recreational use.

2. Kusawa Lake - Takhini River Valley

The Kusawa Lake - Takhini River Valley area is a popular camping and recreation area for Whitehorse residents, and the Kusawa Lake area has been proposed as a Territorial Park. Unfortunately, much of the recently expanded campground and access road were destroyed by a mud slide in 1983, and there are no immediate plans to rebuild the facilities. However, the area's overall recreational features and capability have not been seriously damaged. Terrain suitability studies identified several sites suitable for campgrounds and cottaging, but for most sites, road access would be a problem (Senyk & Oswald, 1981). Progress on a Territorial Park proposal has been a "stop and go" affair over the last few years.

Some detailed biophysical and terrain analysis studies have been completed, but there is little in the way of specific recreational capability, use and demand information. A general trend of increasing recreational use of existing facilities is evident and campground planners estimate that overall recreational use of the area has increased significantly in the last ten years. The overall recreational capability of the area is high and its proximity to Whitehorse is an important factor to consider with respect to current and potential recreational use.

B) The Kluane Region

The Kluane Region is identified as an area of exceptional scenic quality and potential for increased recreational use. Kluane Lake and Kluane National Park are discussed in more detail below.

1. Kluane Lake

Kluane Lake is an exceptionally scenic water body, and is popular with resident and non-resident recreationists. The Alaska Highway follows the west shore providing spectacular vistas of the lake, surrounding mountains, and from some points, wildlife viewing opportunities. Mining related tote roads provide access to the west shore. The lake is popular with resident and tourist anglers and several local lodges and guides provide angling and scenic boat trips, however, the large size of the lake and unpredictable weather conditions can make it hazardous for boating.

Terrain analysis and cottaging studies have identified several sites suitable for campgrounds and/or cottaging where access would not be a problem, however, exposure might be (Senyk & Oswald, 1981). Several site-specific recommendations for recreation development have been identified in a Tourism Development Plan (Government of Yukon, Department of Tourism, 1982). The lake's proximity to Kluane National Park is an important factor to consider for future recreational development, since visitors to the Park could be directed and/or attracted to recreational opportunities in the Kluane Lake area. However, as is the case with most other potential recreation areas in the Basin, there is very little information on actual recreational use and demand.

2. Kluane National Park

Kluane Park is one of the most significant natural attractions in the Basin and probably the most important feature in the Kluane region with respect to outdoor recreation opportunities. Most planned and potential water-oriented recreation development is focused on Kathleen, Mush, Bates and Dezadeash lakes, which are outside the Basin. Development of these lakes could attract recreationists to other lakes and rivers in the Basin portion of the Kluane region, if recreation opportunities were available. There is some tourist-oriented and wilderness recreational user data on the Park, but very little demand information.

C) Yukon River

The Yukon River has been identified as an important historic and recreational waterway. "A Concept Plan for the Yukon River" (Government of Canada, ARC Branch, 1981), describes in detail, its recreational potential, natural and historic features, and presents a comprehensive management plan for the river, which to date has not been officially approved or implemented. More recently, a 30 mile section of the river from Lake Laberge to Hootalinqua has been nominated for Canadian Heritage River System status and there are plans to operate a commercial tour boat between Dawson and Eagle, Alaska. Resource base information on the Yukon River is fairly comprehensive, however, complementary river use and demand information is not.

Burton (1977), estimated that residents took 3450 canoe, kayak or rowboat trips and an additional 7240 motorboat trips on the Yukon River. These estimates included all sorts of trips, from a 1/2 hour motorboat ride out of Whitehorse, to a canoe trip from Carcross to Dawson. A 1978 River User Survey by Parks Canada estimated that 1350 people traveled the river from Whitehorse to Dawson, but this survey did not cover the entire river travel season. In a 1979 study on the recreational potential of the Yukon River, Freeman estimated that 2500 travelers used the river (Freeman, 1980), and that same year, the R.C.M.P. recorded 1426 river travelers. As these figures indicate, there is no accurate estimate of the number of river travelers using the river each year, however, the Concept Study estimated that overall river use had increased 100% between 1974-1979.

The 1978 River User Survey collected information on why river travelers took their trip, and attitudes towards development options. The results are presented in Tables 24 and 25.

The results indicate that river travelers viewed recreational/pleasure and wilderness experience as important components of their trip and did not want any development that would alter the river's wilderness image.

However, the expressed desire for no development does not exclude the need for management. The Concept Plan emphasized that if the river is to remain a valuable heritage and recreation corridor in the midst of increasing recreational and other uses, agencies concerned with tourism, recreation and conservation need to cooperate in overall management.

TABLE 24: REASONS FOR A YUKON RIVER TRIP

Reason	Frequency of Response	Percentage of 96
Recreational-Pleasure	71	74%
Personal Challenge/Accomplishment	25	26%
Wilderness Experience	45	47%
Visit Gold Rush Historic Sites	23	24%
Retrace Old Footsteps	4	4%
Other (Includes Visit Friends on River, Hunt and View Wildlife	12	13%

TABLE 25: REACTION TO POTENTIAL DEVELOPMENT ALONG THE YUKON RIVER

Proposed Development	Respondent in Agreement	Respondent Not In Agreement
No/None Additional Facilities	84(65%)	45(35%)
More/Better Vehicle Access	No Respondent was in Agreement with this Option.	
More/Better Camping Facilities	9(7%)	120(93%)
More/Better Travel Information	2(2%)	127(98%)

Source: A Concept Plan for the Yukon River, Government of Canada, ARC Branch, 1980.

D) Dempster Highway Corridor

Roadside angling is the most popular water-based recreation activity within the Dempster Highway corridor. There are very few accessible lakes and river canoeing is limited because of the long distances between road access and egress points. Recreational opportunities along the highway are geared towards land-based activities such as hiking and camping, and highway travel is regarded as a recreational activity in itself.

CHAPTER FIVE: DEVELOPMENT IMPACTS ON TOURISM, PARKS AND RECREATION

As recreational water related use by residents and visitors in the Basin increases, at the same time, the demand for potentially conflicting water uses is increasing, and in some cases, such development is being actively pursued. The purpose of this chapter is to discuss existing and potential conflicts and compatibilities between tourism, parks and recreation, and other water uses, users and developments which may affect water. At present the most prominant of these activities are:

I) Hydroelectric Development
II) Back Country Access
III) Placer Mining

However, hardrock mining, highway construction, and settlement still pose potential and more site-specific problems.

I) Hydroelectric Development

The purpose of this section is to identify and discuss the effects of hydroelectric development on current and potential tourism, parks and recreation in the Basin, in particular, to highlight special Yukon conditions. To accomplish this task, a list of general impacts of hydro development is discussed with respect to specific Yukon conditions, and then six potential hydro sites in the Basin and their potential impacts on tourism, parks and recreation are examined. These sites represent four categories of potential hydro development:

	Scale	Installed Capcity	Proposed Project
Micro	Up to 5 MW	.75 MW	McIntyre Creek
		2.0 MW	Squanga
Small	5-50 MW	30 MW	Ross Canyon
		40 MW	Hoole Canyon
Medium:	50-500 MW	250 MW (max)	Granite Canyon
Large:	Over 500 MW	600 MW (max)	Mid Yukon

The impact of any hydro development in the Basin depends on the exact location of the proposed project, and the existing or potential tourism, parks and recreation opportunities in the affected area. The effects of hydro development on potential recreation resources are particularly important because of the irreversible nature of such developments. Although current use may be light, most identified recreation potential is associated with lakes, rivers and shorelands - just as hydro proposals are based on potential energy production.

As a general observation it must be stressed from the outset that hydro development involves the permanent alteration of a free flowing river to an artificial impoundment. A lot of energy can be spent in detailed discussions of mitigation and compensation - but that does not alter the basic aquatic system changes that occur.

For this reason it is important to discuss the impacts on hydro development within this context of irreversible change, and particularly within a regional, site-specific context.

No one can argue the recreational benefits resulting from multi - or even single purpose reservoir developments in a water poor area.

But such considerations do not apply in Yukon, and it is perhaps best to acknowledge the economic and value judgment trade-offs that have to be made between efficient hydroelectric energy development and other resource values, than try to rationalize compromises.

The Basin is rich in accessible lakes that no reservoir can really match, and experience at Lake Williston, Mica Reservoir and the Kenmore complex in B.C. have all demonstrated the very limited recreational use of large hydro reservoirs, particularly when they are close to alternative natural lakes.

It is perhaps within this context of making choices about alternative uses of water that the impacts of dam construction on outdoor recreation, parks and tourism in the Basin should really be addressed.

Clearly mitigation and compensation should be key parts of considering these alternatives, but these considerations really only apply after the fundamental allocations for water use have been made.

This in no way undermines the legitimate arguments that the use of water for energy purposes is a totally valid use of the resource. Nor does it downplay the potential for realistic cooperation among water users. (Over one hundred potential hydro sites have been identified in the Basin, and the Yukon River mainstem represents a substantial portion of the Basin's overall potential.) Rather, it avoids a lot of wasted energy and compromising by recreation, tourism and parks planners and managers, who should leave the compromising to the political decisions makers.

It is with this perspective that the balance of the discussion on hydro developments is made.

The relationship between hydro development and other water users will be discussed in more detail in a report prepared by the Yukon River Basin Study Interdisciplinary Task Force on Hydroelectric Development, which is currently being prepared and should be released by June 1984.

A) Impacts of Hydro Development: Special Yukon Conditions

For the purposes of this discussion, hydro development impacts are divided into two categories:

1) direct impacts of facility construction and resulting river changes and reservoirs.
2) impacts from a temporary influx of people.

In the Basin, the actual impacts of interrupting and changing a river by constructing a dam are site-specific, and the degree of impact depends on the river's current use and potential capability for recreation, parks and tourism. Some site-specific examples are discussed later in this chapter.

1) Direct Impacts

a) Access Construction

Providing access to previously inaccessible regions in the Basin can have a considerable impact on the areas' recreation use or potential. A road can open up new recreation opportunities, especially if it leads to a lake and is near to potential users. However, access can also lead to the deterioration of wildlife, fishery, and "wilderness" character, if the areas' potential use is not properly managed. This is of particular concern in the Basin because there is no coordinated policy to manage access and its impacts on recreation use and potential.

b) Recreation Capability of Reservoirs

Mitigation and enhancement studies too often over-emphasize the recreation opportunities offered by a new reservoir. The recreational potential of a reservoir must be compared to the lost recreation value of the river it replaces, along with the actual capability of that reservoir to support recreational activities.

Lakes and rivers in the Basin offer widely different recreation opportunities. Wilderness river recreation usually involves canoeing or rafting, where scenic quality, river hydrology and navigability are important. Trips usually last for several days or weeks so recreationists are willing to drive several hours to an access point.

The potential of a standing water body for recreation depends on its scenic quality, navigability, potential hazards, shoreline fluctuations, beaches, and angling opportunities, and a comparison between Mayo Lake and Yukon's natural lakes clearly shows the difference between a reservoir and a natural lake.

Fishery studies on five possible hydro projects in Yukon predict that the reservoirs created will have low productivity, and for the most part, will not replace existing lake and/or river fisheries that would be impacted (Reid Crowther and Partners Ltd., 1983, for N.C.P.C.). However, the actual potential for reservoirs in the Territory to support a sport fishery has not been thoroughly researched.

Power boat recreation is not as popular in Yukon as it is in southern Canada, and the potential for power boat recreation on reservoirs would depend on navigability (how well the reservoir is cleared), other hazards (such as wind), other recreation opportunities, access and proximity to users, all within the comparative context of local lakes. The canoeing potential for reservoirs is limited. The replacing of an uninterrupted wilderness river canoe trip with a combined river and lake trip requiring a portage would probably detract from the attractiveness of a dammed river for wilderness canoeing, especially when considerable lengths of a river would be converted to a lake-type environment as is the case with the small, medium and large hydro projects discussed in the following sections.

Viewing a reservoir as a "new" cottaging opportunity would depend on the availability of compatable recreation opportunities such as angling, boating, swimming, beaches, the scenic quality of the reservoir, and, in particular, changing water levels which could affect construction and aesthetic qualities. Access, proximity to resident demand, and whether or not the adjacent land could support cottage construction would also be important considerations.

c) Impacts on Resident Lifestyle

Many Yukoners consider the "wilderness character" of the Territory as an important component of their lifestyle, and would view hydro development as detrimental. Similar concerns have been expressed in the past with respect to other proposed developments such as the Alaska Highway Pipeline and development of the North Slope, but it is difficult to predict what public reaction would be to any particular hydro development. It is safe to say that there would be objections on the grounds of preserving the wilderness character of Yukon, especially around small, native communities such as Ross River and Pelly Crossing, where hunting, fishing and "wilderness" itself are important components of the community lifestyle; and where a hydro development would affect important recreation and parks opportunities, such as the Yukon River.

d) Hydro Development and Tourism

The value of a hydro development and reservoir as a tourist attraction has been suggested as a positive impact in studies of hydro development elsewhere in Canada. Yukon's history, its untouched, pristine wilderness and opportunity for wilderness/ adventure are themes used to promote tourism in the Territory, and Yukon's wilderness character is an important component in attracting tourists. Hydro development could provide minor added tourist attraction for some visitors if it were accessible from major transportation routes, however, for the majority of potential tourists, a hydro development would likely be a decidedly negative feature in a supposedly undeveloped wilderness frontier.

e) Impacts on Heritage Resources

The construction of a dam and the creation of a reservoir could impact on known and potential archaeological, historic and cultural features and artifacts. Mitigation of these impacts usually involves extensive research and recovery programs prior to construction.

2. Impacts From Influx of Temporary Workers

A temporary influx of people during construction of a major hydro project would impact on exsting and potential recreation and tourism, especially around small communities with limited services and facilities. For example, the estimated 400 workers required for construction of the Hoole Canyon Project could severely impact the small community of Ross River and indirectly, Whitehorse. However, such impacts can be mitigated by restricting workers to camps and limiting outside recreation activities.

B) Six Examples of Proposed Hydro Developments

1. Micro Scale Projects: McIntyre and Squanga Creeks

McIntyre Creek and Squanga Creek projects are two examples of proposed micro scale hydroelectric developments.

The McIntyre Creek project would involve existing control structures on Jackson, Fish and Louise Lakes, to divert water that would have entered the Ibex River, into McIntyre Creek (Map 4). The project would impact on local fish populations in the area.

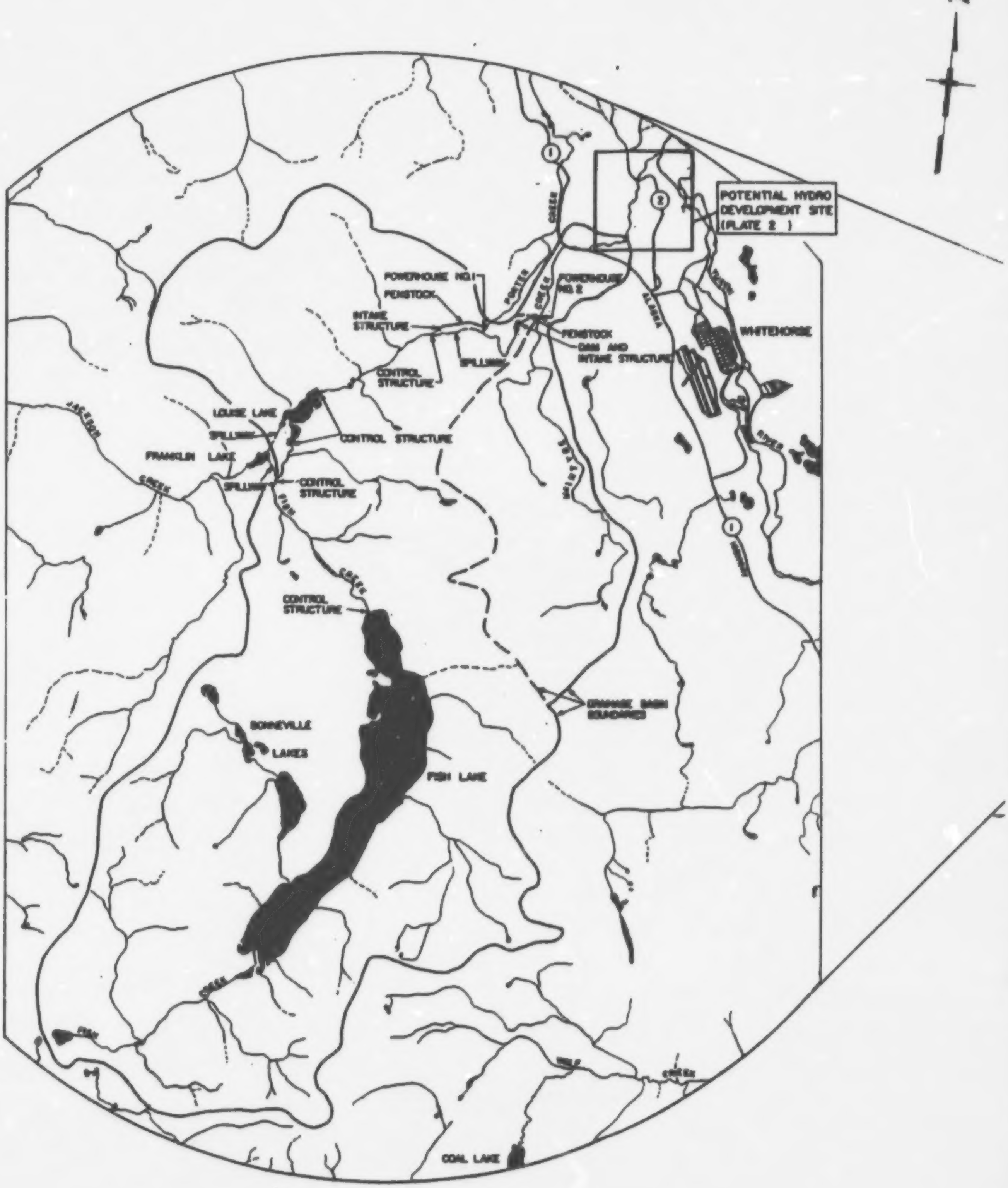
Current recreational use in the area appears to be low but the small headpond could be a good candidate for development of local water related recreation. The City of Whitehorse has proposed a park in the area and the headpond could be incorporated into such plans. If the headpond is a closed system, it would be a good candidate for fish stocking, and could provide accessible local angling opportunities.

The Squanga Creek project would involve a small hydro plant on Squanga Creek near Johnson's Crossing and dams on Teenah, Dalayee and Squanga Lakes which would permit regulation of these lakes to improve firm power flows (Map 5).

There is a small government campground, a floating dock and several cottages on Squanga Lake, and the lake is popular with local and tourist anglers. Dalayee and Teenah Lakes are accessible by a rough four-wheel drive road, and both are used for commercial fly-in fishing. There are several cottages on each lake, and Dalayee has been suggested as a site for future remote access cottaging. Teenah Lake Lodge operates during the summer months, offering angling, trail riding, photography and general wilderness vacations.

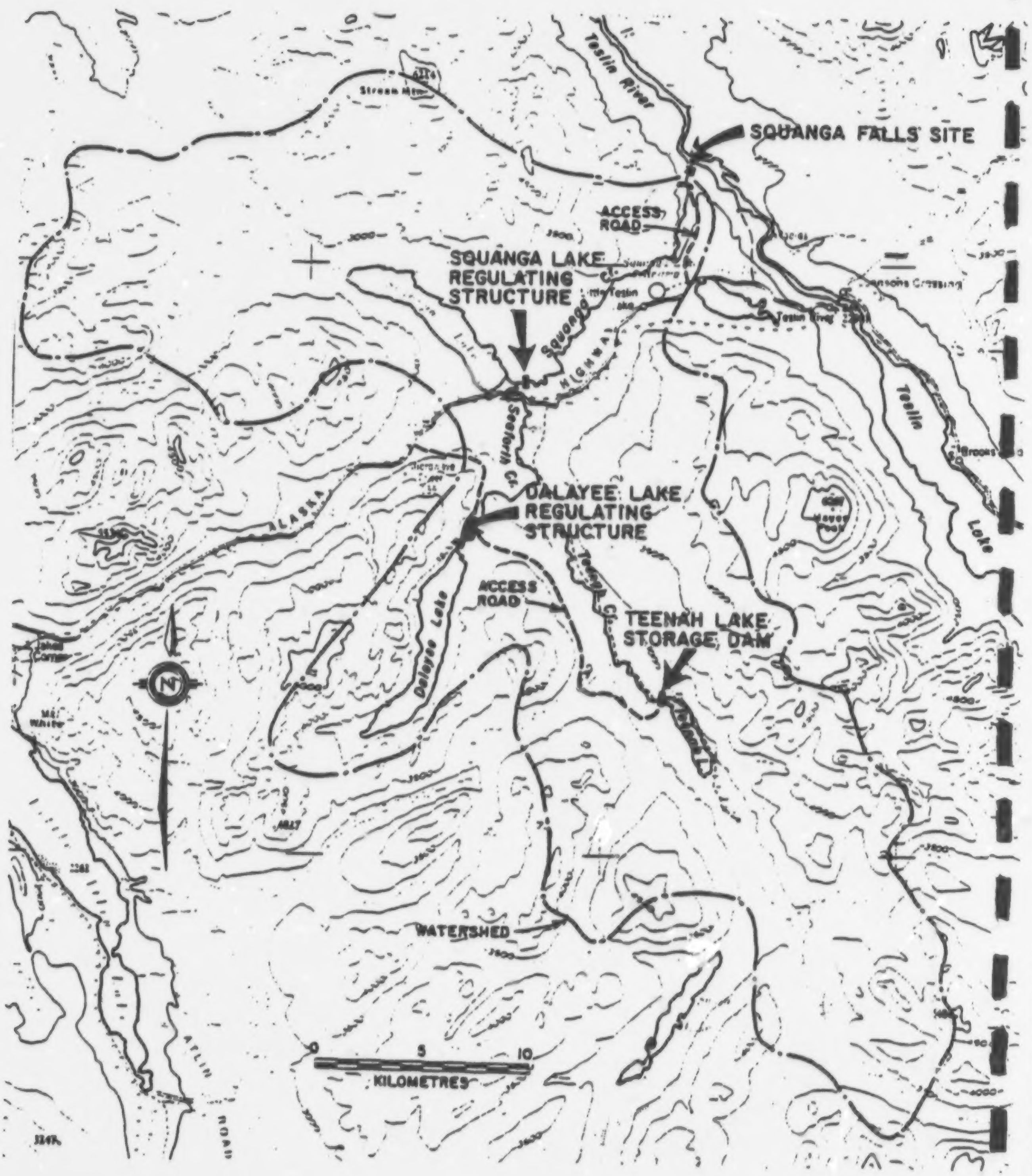
Proposed lake level regulation would not necessitate relocation of cottages or facilities on Dalayee or Squanga Lakes, but four cottages on Teenah Lake would have to be moved. Water level fluctuations on the lakes would impact on existing and potential shoreline recreation opportunities such as boat docks and beaches, and could affect the lakes capability for future recreational cottaging. Information on fishery impacts is not available.

Map 4. Proposed McIntyre Creek Project Location and Site Plan

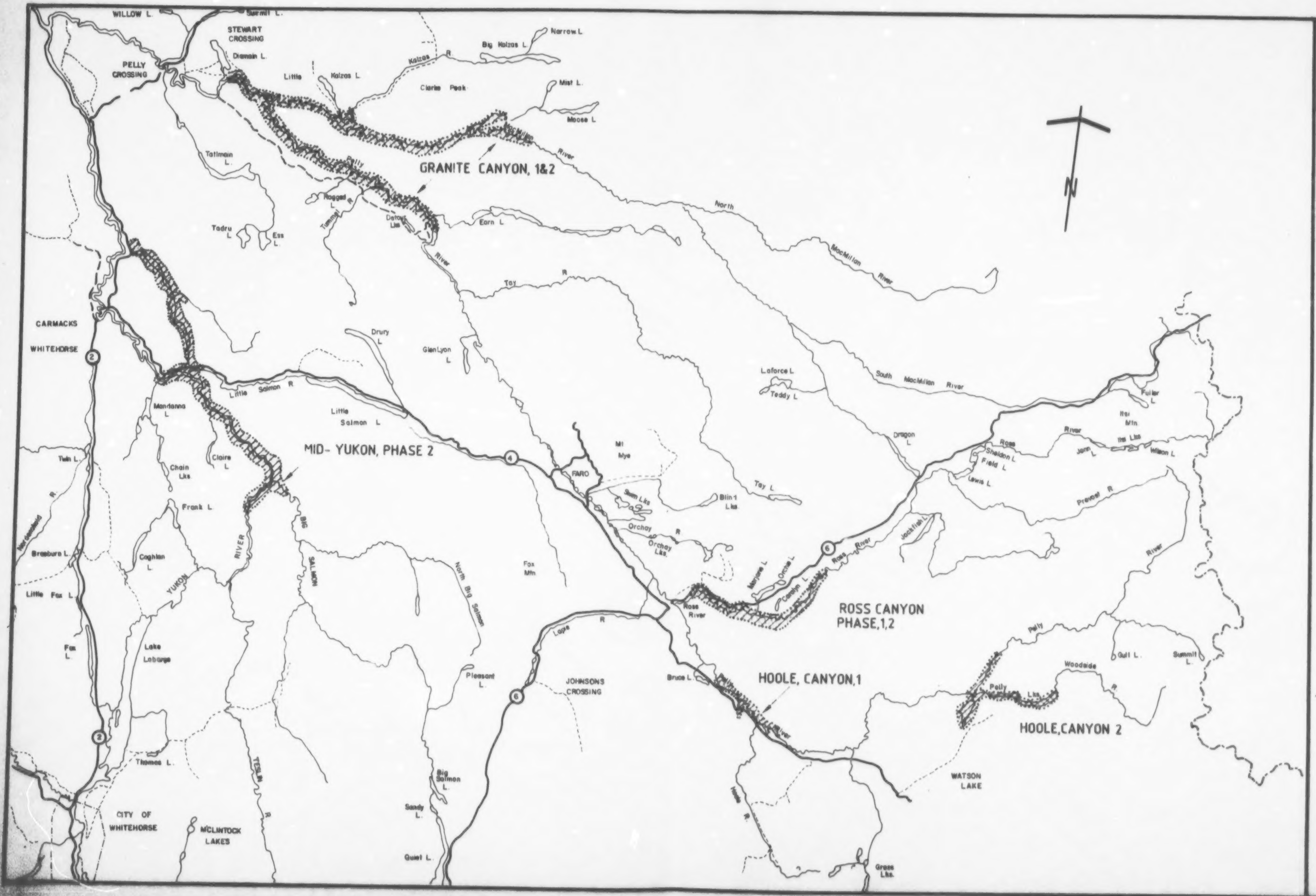

N
POTENTIAL HYDRO DEVELOPMENT SITE (PLATE 2)
①
②
CREEK
PORTER
CREEK
POWERHOUSE NO.1
PENSTOCK
INTAKE STRUCTURE
POWERHOUSE NO.2
PENSTOCK
DAM AND INTAKE STRUCTURE
SPILLWAY
CONTROL STRUCTURE
ALASKA
WHITEHORSE
RIVER
HIGHWAY
LOUISE LAKE
SPILLWAY
CONTROL STRUCTURE
FRANKLIN LAKE
JACKSON
CREEK
SPILLWAY
CONTROL STRUCTURE
FISH
CREEK
CONTROL STRUCTURE
DRAINAGE BASIN BOUNDARIES
BONNEVILLE
LAKES
FISH LAKE
CREEK
FISH
WOLF
CREEK
COAL LAKE

Source: Acres Consulting Services Ltd., 1981.
McIntyre Creek Power Plant No. 3
Prefeasibility Study.

Map 5. Proposed Squanga Hydro Project
Watershed, Upstream Storage Sites & Access


Stream Mtn
Teslin River
SQUANGA FALLS SITE
ACCESS ROAD
SQUANGA LAKE REGULATING STRUCTURE
Little Teslin Lake
Squanga
HIGHWAY
Jensons Crossing
Teslin River
Teslin
Brooks
Seaforth Cr.
DALAYEE LAKE REGULATING STRUCTURE
ALASKA
Mt. White
Dalayee Lake
ACCESS ROAD
Teenah Cr.
TEENAH LAKE STORAGE DAM
Teenah L.
Lake
Jakes Corner
WATERSHED
ATLIN ROAD
0
5
10
KILOMETRES

Source: Moneco Consultants Pacific Ltd., 1982.
Squanga Creek Hydroelectric Project
Prefeasibility Study.


WILLOW L.
Summit L.
STEWART CROSSING
Diamain L.
PELLY CROSSING
Little
Kalzas L.
Kalzas R
Big Kalzas L.
Narrow L.
Clarke Peak
Mist L.
Moose L.
Tatlmain L.
Pelly
GRANITE CANYON, 1&2
Ragged L.
Tummel R
Detour Lks
Earn L.
North
River
MacMillan River
Tadru L.
Ess L.
River
Tay R
N
CARMACKS
WHITEHORSE
2
Drury L.
Glen Lyon L.
Laforce L.
Teddy L.
South MacMillan River
Fuller L.
Itsi Mtn.
Itsi Lks
Montanna L.
Little Salmon R
Little Salmon L.
MID-YUKON, PHASE 2
4
FARO
Mt Mye
Dragon L.
Ross River
Sheldon L.
Field L.
John L.
Wilson L.
Lewis L.
Prevost R
Twin L.
Chain Lks
Claire L.
Sam Lks
Blind Lks.
Tay L.
Frank L.
Orchay R
Orchay Lks.
Jackfish
Nordenskiold R.
Braeburn L.
Coghlan L.
YUKON
RIVER
BIG SALMON
North Big Salmon
Fox Mtn
Mariyme L.
Orchie L.
Caslyn L.
6
Ross River
River
Little Fox L.
Rose River
ROSS CANYON PHASE,1,2
Lapie R
Pelly
Fox L.
Lake Laberge
Gull L.
Summit L.
Woodside R
Pleasant L.
JOHNSONS CROSSING
Bruce L.
HOOLE, CANYON,1
Pelly Lks.
HOOLE,CANYON 2
River
2
6
Thomas L.
Big Salmon L.
Hoole R.
WATSON LAKE
TESLIN R
CITY OF WHITEHORSE
M'CLINTOCK LAKES
Sandy L.
Quiet L.
Grass Lks.

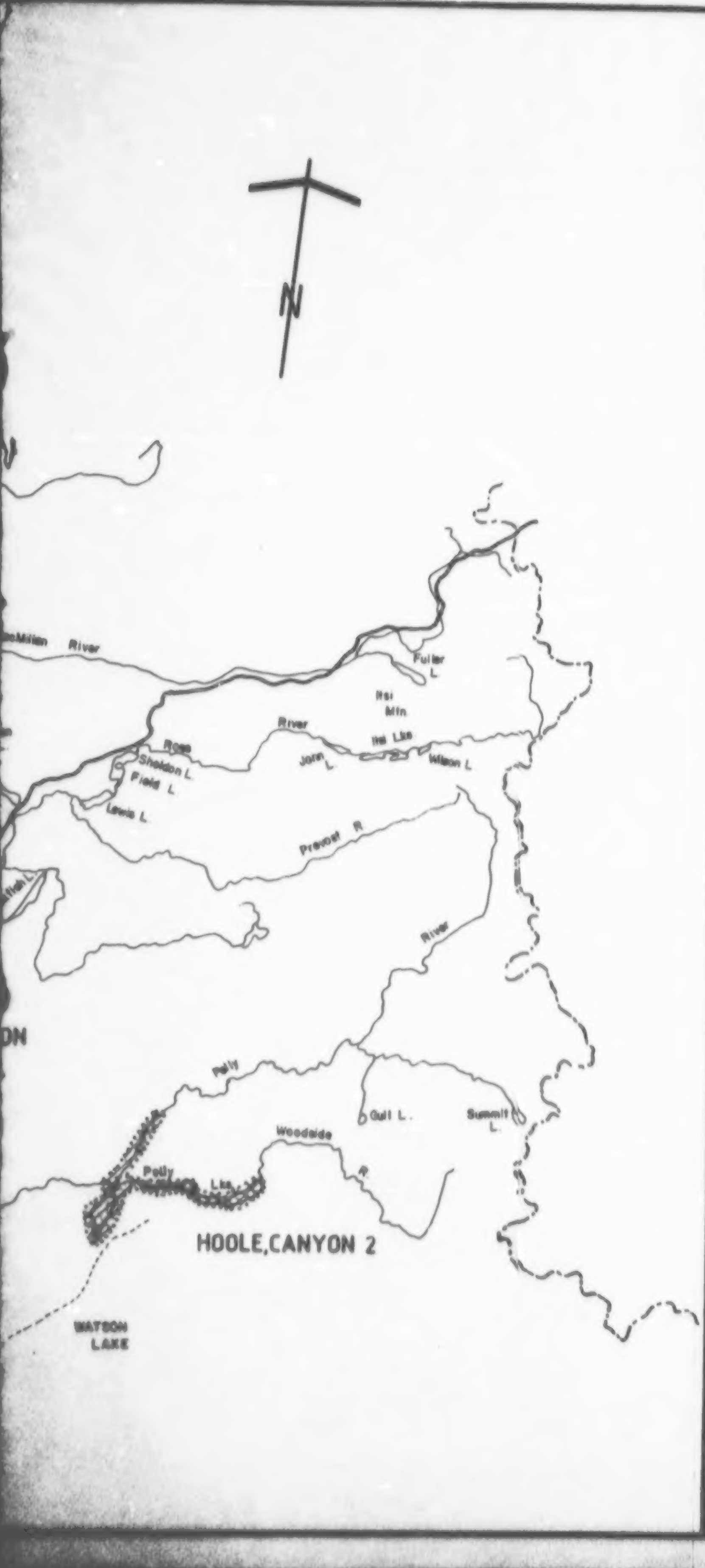
MAP-6

SITE AND RESERVOIR L
FOR PROPOSED HYDRO

ROSS CANYON
HOOLE CANYON 1&2
GRANITE CANYON
MID - YUKON, PHASE 2

SOURCE:

REID CROWTHER AND PA
1982
ENVIRONMENTAL AND SC
ECONOMIC STUDIES OF
PROJECTS IN YUKON
BASE MAP: REID CROW
PARTNERS LTD., 1983


N
MacMillan River
Fuller L.
Itsi Mtn
River
Itsi Lks
Ross
Sheldon L.
Field L.
Jorn L.
Wilson L.
Lewis L.
Prevost R.
River
ON
Pelly
Gull L.
Summit L.
Woodside R.
Pelly Lks
HOOLE,CANYON 2
WATSON LAKE

MAP-6

SITE AND RESERVOIR LOCATIONS FOR PROPOSED HYDRO PROJECTS

ROSS CANYON
HOOLE CANYON 1&2
GRANITE CANYON
MID - YUKON, PHASE 2

SOURCE:

REID CROWTHER AND PARTNERS LTD., 1982
ENVIRONMENTAL AND SOCIO ECONOMIC STUDIES OF FIVE HYDRO PROJECTS IN YUKON
BASE MAP: REID CROWTHER AND PARTNERS LTD., 1983

The Squanga Creek Project would affect current and potential recreational use of Teenah, Squanga, and Dalayee Lakes. The lakes currently support resident and tourist angling, cottaging, camping and boating, and have potential for future remote access cottaging. Further study is required to determine the level of impact and possible mitigation and enhancement opportunities.

2. Small Scale Projects

a) Ross Canyon

The Ross Canyon project would include a dam 8.2 km upstream from the town of Ross River, creating a 73 km^2 reservoir within the existing valley (Map 6). Considerable regulation of flows is proposed along a 7 km stretch of the Ross River between the dam site and Pelly River confluence. Existing access via the North Canol Road would be used.

Tourism use is low and there are no immediate plans or proposals for parks or any other special designations in the project area. Consideration has been given, mainly by the Northwest Territories, to designate the Canol Road as a historic/heritage trail. The major impacts would be on existing local resident hunting and canoeing potential for the Ross River. The Ross has been identified as a good wilderness canoeing river, and receives moderate use from resident and tourist canoeists (Reid Crowther and Partners Ltd., 1983). Local residents frequently use the lower Ross for access to hunting areas, which would be impacted by the reservoir. Guide outfitters use the area occassionally, but prefer more remote regions where resident pressure is not so high.

The reservoir could offer recreational opportunities to people traveling the North Canol Road and to local residents of Ross River, however, considering the local lifestyle of the community, it is unlikely that reservoir recreation could compensate for lost hunting opportunities. Fish productivity potential of the reservoir is expected to be low, however, existing sport fishing use of the river is also low.

In summary the major impact of the project for tourism, parks and recreation would be on local resident hunting, and the potential of the Ross River for wilderness canoeing. The recreational potential of the reservoir would be low considering its distance from areas of high demand, and the low level of tourism in the region.

b) **Hoole Canyon**

Phase one of the Hoole Canyon project would involve a dam on the Pelly River, creating a 17 km^2 reservoir in the valley. Phase two would add a second dam just below Fortin Lake, creating an 80 km^2 incorporating Pelly and Fortin Lakes and about 20 km of the Pelly River (Map 6). A 40 km road would be required for access to the Fortin Lake dam site.

Other than commercial fly-in sport fishing on Pelly and Fortin lakes, tourism use of the area is low. The two lakes have been identified as areas of interest by Government of Yukon, but have not been pursued. Most recreational canoeing on the Pelly River occurs below the proposed dams and reservoirs, where road access to the river is available. The area is popular for resident and non-resident guided hunting and the Pelly River is frequently used for access.

The major impacts of the Hoole Canyon project would be on current and potential fly-in fishing in Pelly and Fortin Lakes, and access to hunting and fishing opportunities which would be provided by a road to Fortin Lake reservoir. The fishery potential of the reservoir would probably be low and would not replace the current lake trout fishery and as a result current and potential fly-in fishing would suffer. Both reservoirs are probably too far away from potential resident and tourist demand to be considered for cottaging or other water related recreation in the near future, except for occasional use by travellers along the Robert Campbell Highway. The dams and reservoirs would interfere with current and potential wilderness canoeing along the Pelly River; however, accessible reaches of the river below the proposed dams are more popular with canoeists.

3. Medium Scale Project - Granite Canyon

The Granite Canyon project would involve a dam 40 km upstream from Pelly Crossing, and a reservoir incorporating 225 km^2 of the Pelly River Valley and 225 km^2 of the South MacMillan River Valley (Map 6). There would be considerable regulation of flows, and construction of a transmission line connecting the project with the existing grid at Carmacks. The existing road from Pelly Crossing to the project site would be upgraded and used as access.

Other than current and potential canoeing on the Pelly and South MacMillan rivers, current tourism in the area is low. There are no identified or proposed parks in the region, with the exception of an environmentally significant area proposed for protection of land-based wildlife.

The lower Pelly and South MacMillan rivers are important for current and potential wilderness canoeing. The South MacMillan in particular is rated as exceptional and has an international reputation for wilderness canoeing. The trip from near its headwaters, accessed from the North Canol Road, to Pelly Crossing represents the longest section of wilderness river between two access points in the Basin. The lower Pelly River is popular with canoeists traveling from Faro or Ross River. Both rivers have definite potential for increased resident and tourist use.

Resident fishing and hunting in the area is low because of lack of road access, however, the area is used extensively by guide outfitters. Sport fishing on the Pelly and MacMillan rivers is light to moderate, and the project would not affect any lake habitat.

The major impacts of the project would be on current and potential recreational use of the Pelly and South MacMillan rivers, and on guide outfittting activity. The fisheries productivity of the reservoir is expected to be low, and its remote location and anticipated regulation of flows decreases its overall recreational potential for residents and tourists. However, its potential for resident recreation would remain low because of its distance from Whitehorse, and the availability of high quality lakes closer to the city. It is unlikely that the recreation potential of the reservoir could compensate for the current and potential use of the rivers.

4. Large Scale Project - Mid Yukon

The two phase mid-Yukon Project would divert the Yukon River through Frenchman and Tatchun Lakes, creating a 152 km^2 reservoir incorporating the lakes and the Yukon River from Rink Rapids to its confluence with the Big Salmon (Map 6).

The project would have a considerable impact on potential parks and current and potential tourism and recreation in the area. Proposed parks and special designations include the Frenchman-Tatchun Lakes park proposal, Klondike Gold Rush International Historic Park Proposal, important areas identified in the "Concept Plan for the Yukon River," and several identified historic sites, trails and features. In addition, any hydro development on the Yukon River could affect potential Canadian Heritage River status for the rest of the system.

The Yukon River is the most popular and frequently used river by residents and tourists in the Basin. It is actively promoted by private businesses and government agencies as a pristine wilderness river, and accounts for about 80% of all tourist boating activity in the Basin. Tourists and recreation related services and features in the area include campgrounds, historic sites, several wilderness guides and equipment rental businesses.

Frenchman and Tatchun lakes and affected portions of the Yukon and Big Salmon Rivers support popular and valuable sport and salmon fisheries.

The Yukon River downstream of Whitehorse is viewed and promoted as an uninterrupted wilderness river with considerable historic significance. Although the mid-Yukon project involves only a portion of the river, the potential of the rest of the river for wilderness recreation would be affected.

Impacts on the immediate area would include flooding several new campgrounds, parts of the Klondike and Robert Campbell highways, known and potential historic and archaeologic sites and a proposed park. The fishery potential of the reservoir is expected to be low, and would not replace the important sport fisheries in Frenchman and Tatchun Lakes and the Yukon and Big Salmon rivers.

Because of its proximity to Whitehorse and the Klondike Highway the reservoir could have some recreation potential, depending on its scenic quality, navigability and shoreline fluctuations.

Suggested mitigation methods to "compensate river travelers for any deemed loss of wilderness experience in the reservoir area" (Monenco, 1980) include several alternatives for transporting craft around the dam, as well as providing other recreational services such as a hot springs type swimming pool and a fully serviced campground. These mitigation and enhancement opportunities simply replace a wilderness experience with a developed one; an alternative which would not be acceptable to resident and tourist recreationists in the basin of the current preference, although the dam and reservoir itself might also be viewed as a tourist attraction, considering its proximity to the well traveled Klondike Highway.

II) Back Country Access

Current and potential tourism and recreation activities in the Basin are closely associated with major transportation routes and back country roads.

Of particular concern in this study, are the existing and potential impacts and opportunities that back country road use and development has, and could have on aquatic based tourism, recreation, wildlife, fisheries and historic resources in the Basin, because of the ready access they can provide to streams and lakes. Individually, back country roads may not seem to be a major problem, but collectively they form a very important component of Yukon's transportation system and their management involves decisions on economic, environmental and political fronts.

Most current tourism is primarily related to major highways and the services, sites and features accessed by highway corridors (Map Series A, Vol. II). Back country roads, which are not presently classified but referred to as four-wheel drive roads, tote trails and seasonal roads, provide access to remote wilderness areas, and are frequently used by resident recreationists and to a lesser degree by tourists. Although most back country roads were not or are not constructed for recreational purposes, they are becoming increasingly important components of wilderness oriented tourism and recreation in the Basin. The emphasis in this section is on back country roads, their current use, impacts and conflicts, and potential for future tourism and recreation.

The Department of Indian and Northern Affairs (DINA) is responsible for issuing permits and stipulating regulations governing road construction. The Land Use Advisory Committee (LUAC), made up of representatives from a variety of government agencies concerned with land and water use and management, reviews proposals including access development, and recommends whether permits should be granted and any special restrictions or changes which should be made.

Once the road is constructed, responsibility for its continued management is passed to YTG. This mandate is clearly laid out in the Yukon Act, and includes responsibility for all phases of maintenance and management, permitting access to existing roads, altering roads and controlling their use. In addition, DINA has indicated that it considers YTG responsible for ecological and socio-economic issues and problems resulting from access (J. Kuhn, correspondence June 11, 1981). Past experience has shown that having the authority to control use of back country roads is one thing; enforcing that control is quite another. To date, YTG has done very little towards managing back country roads. The lack of an adequate data base supplying even the most basic information on location, condition and use of existing back country roads has not been completed and without such data, decision making for coordinated comprehensive planning and management is not possible. Many back country roads have been developed by "default", i.e. by ad hoc recreational users, with little or no thought to ecological and socio-economic impacts. Another major concern is the possibility that more popular roads may eventually develop into major transportation routes, as has often been the case in the past. Future managment of such roads could prove extremely difficult if nothing is done to direct or control their development and patterns of use.

Old and new road access to sensitive wildlife areas along or near waterways, including winter ranges, calving sites, nesting areas and geographically discrete wildlife populations is of particular concern. Some species of wildlife rely on restricted valley bottom habitat during the winter and use of winter roads may be especially damaging to these populations. Recent increased placer activity in alpine regions has impacted on sensitive wildlife habitat and the aesthetic quality of those areas. Past experience has shown that in some cases, road access has contributed to declining wildlife populations in areas of high demand, but in other cases, road access provides additional hunting opportunities which may divert pressure away from over hunted areas. Another important consideration is the value of back country roads for providing non-consumptive wildlife use opportunities. The chances of viewing and photographing wildlife from back country roads and areas accessed by them is probably far greater than from well-traveled major roads and highways.

Road access to previously remote lakes can have a considerable impact on the fishery, especially if the lake is in an area of high demand. The low productivity of most Yukon lakes can result in their being rapidly overfished if access and sport fishing use is not intensively managed.

Access use and construction can impact on known and potential historic and archaeological resources during construction and by providing access to previously remote sites.

Back country roads are an important component of outdoor recreation in the Basin, and they have the potential for becoming increasingly important to wilderness/adventure tourism. There could be substantial economic and social benefits from their proper development, management and promotion for tourism and recreation in the Basin, or conversely, continued unplanned ad hoc development could result in considerable economic and social losses including impacts on wildlife habitat, scenic and ecological degradation, destruction of historic and archaeological resources, and missed opportunities for recreation and tourism development.

Coordination between road developers, transportation, water, tourism, recreation, fisheries and wildlife managers is essential, if back country road development and management is to be successful. LUAC represents an important component of this coordination at the pre-construction phase, however, additional cooperation is required once roads are developed. A first priority should be the coordinated compilation of a baseline inventory of existing access including location, use and condition, and impacts and opportunities for other resource uses and users. Any planning undertaken within the Basin, for whatever purpose (wildlife assessment, resource development, tourism, etc.) and by any agency, must address the important issue of the impact of access.

III) Placer Mining

Placer claims may be staked almost anywhere within the Basin, with the exception of parks, federal park reserves and communities (Debicki, 1983). Historic placer activity has changed the landscape and waterways in several regions and because of its relationship to the Klondike Gold Rush, it is recognized as being a component of tourism in the Basin. Current and potential placer activity could also have a considerable impact on the Basin's capacity to support wilderness, water related recreation and tourism. The information presented in this chapter is based on presentations and discussions from the Public Review Committee on Placer Mining Guidelines (see bibliography), and on discussions with tourism and other resource managers.

The Yukon Voyageurs and Canoe Club, the Association of Wilderness Guides and several other groups involved in wilderness recreation and tourism have expressed concern about current and potential impacts of placer activity on the Basin's wilderness resources, especially its rivers and streams. These groups are concerned about the apparent lack of consideration of current and potential recreation and tourism uses of water courses in the Basin as economically and socially important components which should be taken into account in any water use planning. Some particular concerns expressed included; aesthetic and scenic degradation especially along river banks, water and auditory pollution, creation of river hazards, use of riverside claims for squatting, access impacts, and negative impressions left on wilderness tourists and recreationists. Wilderness guides emphasized that they rely on the Basin's wilderness character to attract clients, and that wilderness travelers are becoming an increasingly important component of tourism in the Basin. Degradation of the Basin's wilderness resources could jeopardize not only their livelihood, but the potential for growth in this sector of the industry. The Wilderness Guides and the Canoe Club suggested that any river classification system should include its wilderness value and tourism and recreation capability and potential, particularly for rivers recognized or identified as exceptional wilderness rivers; and that these factors should be considered in determining current and future use and development.

Concern has also been expressed regarding the impact of ongoing and potential placer exploration and mining on the Territory's historic and archaeological resources. Although placer mining is an important component of the Territory's current economy, other historic and archaeological resources are also important and impacts of any development on them should be considered in overall resource planning and management.

Construction of road access for placer exploration and to claims is a common practice in the Basin, and most of the concerns regarding back country roads discussed previously, apply. Placer access roads are not constructed as part of a regional transportation plan, and potential impacts on other land and water users are not always considered. These roads are rarely located or constructed by experienced engineers, often resulting in serious erosion problems and environmental degradation. Recommendations for improving the situation include encouraging more use of air access for placer prospecting, especially in important wildlife areas. Possible beneficial uses of existing and potential placer access for tourism and recreation should also be considered.

Historic placer mining and the physical, social and economic changes it brought to the Yukon and northern B.C. are important components of the region's heritage. The importance of historic placer mining to tourism is well documented, however, its importance to current and potential tourism has not been dealt with conclusively. Some issues requiring further study include:

1) Expectations and satisfaction or dissatisfaction of tourists with respect to current placer activity in the Basin.

2) The impact of current and potential placer activity on "wilderness" versus "highway" tourists and tourism.

3) The potential of current and future placer operations as tourist attractions.

4) The development of a tourism theme covering the evolution of placer mining from the gold pan to modern technology.

5) The importance of the gold nugget jewelry industry to tourism and the local economy.

6) The relationship between placer and tourism infrastructures in Basin communities.

In summary, the relationship between current and potential placer activity and tourism and recreation requires considerably more study before positive and negative impacts can be properly assessed.

CHAPTER SIX: CONCLUSIONS

The conclusions presented in this chapter represent a synthesis of the issues and concerns related to water-based tourism, parks and recreation, that have been raised during the course of this study. They are organized to reflect the text of the main report, however, interrelationships between the components of tourism, parks and recreation make it impossible to separate some of the issues and concerns.

I) General Conclusions

A) Coordination and Cooperation

A recurring conclusion throughout the course of this study has been the necessity for coordination and cooperation between the multitude of federal, territorial, provincial and municipal agencies responsible for various components of tourism, parks and recreation in the Basin. The initiative for creating a system that ensures coordination and systematic approach for the planning, development and management of tourism, parks, recreation and related activities is weakened unless bounded by an appropriate policy framework. Some of the agencies responsible for managing the various components of tourism, parks and recreation lack not only a policy framework, but a mandate for managing components they appear to be responsible for. These will be discussed in more detail in subsequent sections of this chapter.

This jurisdictional tangle exists at a time when the demand for, and participation in tourism and recreational opportunities and activities are water related, and it is essential that areas of existing and potential tourism, parks and recreational value are recognized and considered in overall planning and development of water resources. This is particularly important in light of the growing demand for potentially conflicting water uses such as hydro development and placer mining.

B) Continued Assessment of the Basin's Lakes and Rivers

A second important issue involving the close relationship between tourism, parks and recreation, is the necessity to continue the assessment of the Basin's lakes and rivers to determine their capability to meet the existing and potential demands of resident and non-resident recreationists, and to assess the requirements for establishing parks and other protective designations. The studies carried out for the Tourism, Parks and Recreation Work Group represent an initial step in this assessment; that of bringing together existing resource and user data and identifying some of the information gaps. The studies also present or suggest systems and methods by which this assessment and analysis can be pursued in the future.

C) Coordinating Resource Base and Resource Use and Demand Information

Research for the descriptive synthesis project has shown that a major weakness present in tourism, parks and recreational planning lies in the lack of coordination between collection and analysis of resource base data, and its application by tourism and recreation managers towards meeting user demands.

Studies initiated by the Tourism, Parks and Recreation Work Group have resulted in compilation of a significant data base relevant to assessing the recreational capability of lakes and rivers, and steps should be taken to improve and refine this resource data base.

Rivers and lakes with high recreational values and potential should be identified for particular consideration with respect to potential water use developments, or for possible protective designation for recreation, parks or tourism purposes. This potential should be continuously reviewed and assessed in coordination with relevant interest groups in the context of overall tourism and recreation planning.

With the exception of tourism-oriented visitor statistics and some basic hunter and angler data, use and demand information on water related recreation is practically non-existent in the Basin, and therefore needs to be developed. The needs of both resident and tourist recreationists will have to be carefully considered in the management and development of water related recreation. Also, the divergence in opinion among tourists and residents as to whether recreational opportunities should be developed or preserved in an undeveloped state will probably always be an ongoing management concern which will have to be taken into account. However, the desire for limited or no development does not eliminate the need for management of tourist and recreation resources.

D) Standardization of Data Collection and Storage

Existing data collection methods for tourism, parks and recreation should be coordinated and standardized to facilitate future data collection, and for eventual adoption of a computerized data storage and retrieval system.

E) The British Columbia Portion of the Basin

The B.C. portion of the Basin is not a high priority area with tourism and recreation managers in B.C. The area contains significant existing and potential high quality water related resources for recreation and tourism. Since visitors attracted to this region would have to access it through the Yukon portion of the Basin, increased opportunities in the B.C. portion would have a significant impact on Yukon tourism and recreation.

Unlike Yukon, B.C. has some policies, goals and objectives in place for managing heritage resources, parks and recreation components, however, since the area is not a high priority with many of these resource managers, it does not receive much attention. Because of the region's potential importance to Yukon tourism and recreation, activities on both sides of the B.C./Yukon border should be closely coordinated.

II) Specific Conclusions

A) Tourism

Further growth of Yukon's tourism industry will depend on long range planning today to respond to and accommodate predicted and potential changes in tourist trends. These changing trends will require unique approaches to development, management and promotion techniques from both government and private agencies.

1. Wilderness/Adventure Travel

Within the Basin area, as with the total industry, wilderness/adventure travel will be an important element with growth potential. This growth potential will be particularly dependent on the perceived availability of quality wilderness resources, and their capability of supporting increased recreational use. Ongoing assessment of these resources, especially lakes and rivers, to determine their use capacity, variety of opportunities, marketing and competitiveness in world markets will be particularly important for effective promotion of wilderness/adventure travel.

2. Promotion of Wilderness Resources

There is a need to examine the relationship between how wilderness features are promoted in the Basin, and visitors' satisfaction or dissatisfaction with what they actually experience. Wildlife viewing and sport fishing opportunities in particular need to be addressed, since preliminary surveys indicate that some visitors are not satisfied with the opportunities they experienced, compared to what they were led to believe existed. The different expectations of, and opportunities available to highway versus wilderness travelers will have to be taken into account. This issue is an example of how better coordination between resource managers and tourism and recreation managers and promoters could lead to a more effective way of using the Basin's wilderness features.

3. Destination Areas, Features, Services and Facilities

There is a need for more destination areas, features and necessary infrastructure in the Basin, especially for outdoor recreation seeking tourists and residents, if they are to be convinced to spend more of their leisure and/or vacation time in Yukon. This is particularly important with respect to the trend towards more specialized, rather than touring vacations.

In addition to the development of destination areas, there is a need for more site-specific tourist attractions, and for preservation of those that do exist. Historic sites in particular, are very important components of tourism and need to be preserved if they are to remain assets for future tourism.

The opportunities do exist for such development in the Basin, and have been addressed in documents received for this study. Some examples include:

- development of services and facilities at Haines Junction to meet the anticipated needs of wilderness-seeking travelers to Kluane Park.

- development of more shoulder and off-season attractions such as the Whitehorse Ski Chalet and winter recreation opportunities at Dezadeash Lodge.

- development of more recreational opportunities associated with campgrounds, particularly access to, and exploration of both unique and representative natural features, and trail access to lakes and stream reaches.

- development of Atlin as a key local service centre to take advantage of its highly visible historic resources.

- downtown and waterfront beautification schemes for Whitehorse, and development of historic features within the City, all leading towards more theme-oriented attractions.

The anticipated trend towards more mass mode traveling in Yukon will have to be taken into account in the development of features, services and facilities. Catering to the interests and requirements of large groups of people requires a significant different approach and infrastructure than catering to small groups in single automobiles.

4. **The Economic Importance of Tourism**

In recent years tourism has played an increasingly important role in Yukon's economy, and in 1983, tourism was the leading private sector industry in Yukon's economy. There is a continued need for Federal/Territorial funding and incentive programmes such as CYTA, to ensure the continued development of tourism in the Territory.

5. **Tourism Planning**

In order to increase opportunities for tourism growth and coordinate the development of destination areas and features and necessary infrastructure, there is a continued need for development of tourism themes and long term planning the Basin.

B) Parks

The responsibility for the establishment and management of parks and conservation areas within the Basin is divided between federal, territorial and provincial jurisdictions.

1. Government Jurisdictions

The Federal Government and Government of B.C. have mandates, policies, goals and objectives in place concerning parks, but neither agency has immediate plans for new park development in the Basin. Development and management of existing features is being actively pursued by federal and provincial governments and include; proposed National Historic Park status for the Canadian portion of the Chilkoot Trail, development of historic features at Dawson, interpretation features at Kluane Park and ongoing management of Atlin Wilderness Park.

Although the Park Act provides the Government of Yukon with a mandate to establish a park system in the Territory, little progress has been made in developing and implementing a comprehensive policy to achieve this mandate. Parks planning is being pursued in a somewhat ad hoc manner according to the guidelines described in the Act, but if important recreation areas are to achieve the protection and management required in the near future, a comprehensive policy is essential. Such a policy will have to address the need for coordination and cooperation between resource managers and tourism and recreation managers at all levels of government within the Territory, and between territorial, provincial and federal governments.

2. Kluane National Park

Kluane National Park has a particularly important role to play in tourism and recreation planning in the Kluane region. The park has the potential to attract a significant number of recreation seeking tourists and residents to the Kluane region - a fact which has been taken into consideration by federal and territorial park, tourism and recreation planners in the area so far. Tourism, park and recreation planning currently involves cooperation between federal, territorial and private groups and the public, which should be encouraged to ensure regional planning is coordinated with park development.

3. Joint Federal/Territorial and/or Provincial Proposals

In addition, joint federal/territorial and/or provincial proposals are being pursued such as Canadian Heritage River Status for the 30 mile section of the Yukon River, or proposed, such as the Klondike Gold Rush International Historic Park and a National Landmarks System.

4. Park Potential

This study summarizes available information on most areas in the Basin which have been identified as having parks and recreation potential or are in need of protective status or conservation measures. The proposals are in various stages, many are out of date and their current or potential status is uncertain. These identified areas should be reviewed and re-assessed by the responsible agencies, and priorities set for planning and management.

"Park" status is not the only designation that can be considered for important recreation and conservation areas in the Basin. Other possible protective and management measures should be explored with reference to their applicability in the Basin.

C) Heritage Resources

1. Balanced Representation of Heritage Resources

Heritage resources play a major role in attracting and holding visitors to Yukon, as well as being a major source of education, enjoyment and a reminder of a cultural heritage for Yukon residents. The Gold Rush was probably the most important historical event in the Basin in terms of effects on subsequent development, and most inventory, research, rehabilitation and promotion efforts reflect this emphasis, and the value of Yukon's Gold Rush history to tourism. Agencies and individuals concerned with heritage resources in the Basin are stressing the need for a more balanced representation of the Basin's heritage resources in these efforts; in particular its prehistoric early pre Gold Rush history and post Gold Rush developments.

2. **Condition of Important Historic Sites**

A major concern at the present time is the rundown condition of numerous important historic sites in the Basin, some of which have been identified as having particular tourism potential. These sites include Silver City, Dalton Post, and several sites along the Yukon River which are visited frequently by river recreationists.

3. **Heritage Resource Impact Assessment**

Other concerns include the need for Heritage Resource Impact Assessments to be carried out as part of land and water use developments, and the need for heritage resources to be taken into account in all land and water use planning.

4. **New Heritage Legislation for Yukon**

Many of the concerns related to heritage resources discussed in this study are addressed in new heritage legislation for Yukon, currently being prepared by the Yukon Government.

D) Outdoor Recreation

1. General Conclusions

a) In response to increasing recreational use of water, combined with an increasing demand for potentially conflicting water uses, it is mandatory that the importance of water-related recreation in the Basin be identified, and in particular, that areas of existing recreational value and future potential are recognized and considered in overall planning and development of water resources.

b) A lack of clear government policy concerning outdoor recreation in the past has led to a lack of direction in recreation planning and development in the Territory. There is a critical need for a clear definition of mandate, objectives and implementation programs for recreation, because lacking such a framework, the meaningfulness and effectiveness of any planning exercise is severely limited.

c) The need for up-to-date use and demand information for water related recreation activities is especially important for current and future recreation planning. Resident and visitor use and demand information is required for the Yukon River in particular, in light of the potential for considerable increased use related to proposed tour boat use north of Dawson and Canadian Heritage River status for the 30 mile section from Lake Laberge to Hootalinqua.

2. Campgrounds and Other Services and Facilities

a) Recent government campground planning and development has been geared towards the creation of a system better suited to meeting anticipated resident and tourist use and demand, however, better campground user information is required for effective management.

b) Most government campgrounds in the Basin are located on or near waterbodies, and offer some water related recreation opportunities.

Future campground planning could include development of more recreation opportunities to encourage visitors and residents to spend more time in the Territory. This would include the provision of access to, and interpretation of unique and representative natural features. The development of self-guided nature trails, etc. could be valuable, labour intensive activities that also contribute naturally to a better park and campsite programme.

In addition, creation of wilderness campsites along popular recreational rivers may be necessary in order to avoid further degredation of frequently used, but unmanaged campsites.

c) Government agencies and the private sector have cooperated effectively in the planning, development and promotion of tourist and recreation services and facilties in the Territory in recent years. Government incentive agreements have assisted in funding public and private sector developments, and private sector interests have been incorporated into tourism and recreation planning wherever possible. Continued cooperation between private and public developers and planners is essential for effective tourism and recreation development in the Basin.

3. Boating

a) The potential for development of power boating and sailing in the Basin is limited, except where it is associated with cottaging, angling and hunting, and should be considered in planning for those activities. However, most of the larger lakes in the Basin are subject to hazardous wind conditions, which can make small craft boating on them particularly dangerous.

There is a much greater potential for increased recreational canoeing on some rivers in the Basin including the South MacMillan, Big Salmon, Nisling, Primrose, Takhini, Wheaton and Wolf rivers (Reid Crowther and Partners Ltd., 1983). Several other rivers including the Yukon and Teslin are currently very popular with resident and tourist recreationists and may require immediate management if their wilderness quality is to be preserved. Existing and potentially important recreational rivers should be identified so that their recreation use and potential can be considered in overall water use planning and development.

4. Sport Fishing

a) Sport fishing is an important component of water related recreation and tourism in the Basin. However, a comprehensive sport fishery management plan does not exist for the Basin and the issue does not appear to be a priority with responsible agencies. Transfer of responsibility for sport fishery management in Yukon from the Department of Fisheries and Oceans to the Territorial Government is being pursued, however, there is no indication as to when the transfer might take place.

b) Further, there are limitations to the basic resource and user data available on which to base such a management plan. These inadequacies include demand and use information on the Yukon resident angler; the group which makes the most demands on the Basin's sport fishery; visitor and resident expectations and satisfaction or dissatisfaction with angling opportunities and comprehensive information on the economic value of the Basin's sport fishery.

c) There is also a need to coordinate sport fishery management with overall tourism and recreation planning. Development of tourist and recreation features and opportunities near water could attract and concentrate angling activities in the area, and fishery capability should be incorporated into overall planning.

d) The continued gathering of information on fish productivity and use capacity is an essential foundation for better user data, but the two must proceed at an equal pace if a rational management plan is to follow.

5. **Wildlife**

a) The Government of Yukon is responsible for managing wildlife in the Territory, however, the Wildlife Management Branch has had some difficulty in achieving its objectives because although it has jurisdiction over wildlife, it has little or no control over habitat or native hunting. As a result the Branch has had to rely heavily on manipulating and restricting hunting licensing and seasons, rather than comprehensive wildlife management.

b) Information on resident and non-resident hunting in the Basin is fairly comprehensive though efforts should be made to keep available data accessible and up-to-date.

c) Recent information on non-consumptive uses and value of wildlife to Yukon residents and visitors to the Basin is practically nonexistent. The opportunity to view and photograph wildlife is assumed to be an important component of tourism, and is mentioned frequently in promotional material, however, as noted earlier, visitors are not always satisfied with actual opportunities that exist. This facet of recreational use requires specific management attention and far more careful "business development" than it has received to date. In addition, there is no information on the value of wildlife to Yukon residents as part of a "Yukon lifestyle".

d) These issues need to be addressed and incorporated into a policy framework which deals with non-consumptive values of wildlife. This information becomes particularly important when it comes to assessing the impacts of other potentially conflicting uses of water such as hydro development, on the wildlife resource and its users.

e) A comprehensive evaluation of the economic value of the Basin's wildlife resources is required, which would include market and non-market components of hunting and non-consumptive uses of wildlife.

f) With the increasing recreational use of lakes and rivers in the Basin, there is a very real potential for serious bear/recreationist conflicts. Known areas of existing and potential hazards include Frenchman-Tatchun Lakes, west end of Kluane Lake, Earn Lake, Yukon River north of Dawson and the north Klondike River.

Steps need to be taken to educate recreationists and recreation promoters about the existing and potential hazards related to bears.

g) Raptors, especially peregrine falcons, have a particularly high aesthetic value among recreationists, and a considerable amount of effort has gone into the re-establishment of these birds in some areas of the Basin. Efforts should continue to protect and manage raptors, and recreationsist should be informed of the precautions that need to be taken in raptor habitat. There may be specific problems associated with nests along the Yukon River and if recreational use increases significantly, it may be necessary to assign a conservation/interpretation officer to the corridor during the summer months.

h) There is a conflict between general wilderness guides and guide outfitters who want to promote a wider range of wilderness activities as part of their business, within their guide outfitting areas. Some guide outfitters feel that their G.O. licence grants them exclusive rights to wilderness activity in their areas; a point of view which is not stipulated in the actual licence, or supported by general wilderness guides. The potential also exists for "overcrowding" in popular wilderness areas, between all types of wilderness recreation operations. The guided wilderness recreation business and its demands on water related wilderness resources will have to be seriously evaluated in the near future, in order to avoid negative impacts on the actual resource and on the tourist business which it supports.

6. Recreational Cottaging

a) Virtually all sites capable of supporting subdivision-type cottage lot development on large lakes within reasonable proximity to Whitehorse have already been developed. Future cottage lot planning will have to take this into account, and may have to create new and innovative cottage lot developments in order to meet pulic demand within existing environmental and logistic constraints.

b) Although there is a considerable amount of inventory and some planning information on potential cottage lot sites and developments, complementary recent demand information is inadequate. Without this demand information, effective cottage lot planning is difficult.

c) Responsibility for future cottage lot planning and development within the Government of Yukon has yet to be decided, however regardless of which department is assigned the mandate, coordination and cooperation between land, water, recreation, fish and wildlife managers will be essential.

E) Development Impacts on Tourism, Parks and Recreation

Water related activities such as boating, angling, cottaging, camping, hunting and wildlife viewing are major components of tourism and recreation in the Basin. As recreational water use by residents and visitors increases, the demand for opportunities, services and facilities will also increase. At the same time other water related resource developments are being actively pursued, which may have potentially conflicting and compatible impacts on tourism, parks and recreation.

1. Hydroelectric Development

The effects of potential hydro development on recreation resources are particularly important in the Basin, for two main reasons:

a) Most identified recreation potential in the Basin is associated with its lakes, rivers and shorelands, even though current use of some of these resources may be light.

b) The irreversible nature of hydro developments.

With the exception of very localized, water related recreation opportunities offered by micro-scale developments close to user demand (such as the McIntyre Creek proposal), the potential for reservoir related recreation opportunities in the Basin are limited. The Basin is rich in accessible, natural lakes that no reservoir can really match, and it is perhaps best to acknowledge the economic and value judgment trade-offs that have to be made between efficient hydroelectric energy development and other resource values, including water related recreation, than try to rationalize compromises. In this context, it is crucial that current and potential recreational values of potentially impacted waterways are identified and considered as part of any water related planning and development.

2. Back Country Roads

a) Back country roads are an important component of water related outdoor recreation in the Basin because of the ready access they can provide to streams and lakes and they have the potential for becoming increasingly important to wilderness/adventure tourism. In addition, access to previously remote areas can have a considerable impact on wildlife and fish populations, heritage resources, and the aesthetic quality of wilderness areas.

b) The relationship between back country access roads into remote areas and existing and potential positive and negative impacts on recreation and tourism, has never been adequately defined in the Basin. Although some coordination between road developers and other land, water, wildlife, tourism and recreation managers exists at the pre construction phase, it is clearly lacking for post construction management. The Government of Yukon is responsible for post construction road management in Yukon, however to date, little has been done towards managing these roads.

c) It is imperative that a policy for dealing with back country access and its relationship to other land and water uses be developed within the Yukon Government. An important initial step should be the coordinated compilation of a baseline inventory of existing access, including location, use and condition, and impacts and opportunities for other resource uses and users.

3. Placer Mining

a) Historic placer activity has changed the landscape and waterways in several regions in the Basin, and because of its relationship to the Klondike and Atlin gold rushes, it is recognized as being a component of tourism. Current and potential placer activity could also have a considerable impact on the Basin's capability to support wilderness, water related tourism and recreation.

b) Particular concern has been expressed about the impacts of placer activity on the aesthetic quality and recreational value of important and potentially important recreational rivers and streams, and the need to include the recreational value of waterbodies in all aspects of water use planning.

c) The importance of historic placer mining to the Basin's heritage and tourism industry is clearly established, however, the relationship between ongoing placer mining and current and potential tourism has not been dealt with conclusively.

BIBLIOGRAPHY

The bibliography is divided into four sections:

I) Literature Bibliography which includes a complete citation and location.

II) Detailed Cottaging Bibliography which includes documents, map and file information pertaining to recreational cottaging in the Yukon portion of the Basin.

III) Map Bibliography which includes information on maps used for the study and maps which provide more detailed information.

IV) Agency and Individual Contacts which lists sources contacted during the course of this study, and which would be able to provide additional information.

Whenever possible, an abbreviated retrieval location is listed with each source. Retrieval locations include:

1)	Yukon Territory Archives, Whitehorse	ARCH
2)	Council for Yukon Indians, Whitehorse	CYI
3)	Government of Canada, Fisheries and Oceans, Whitehorse	DFO
4)	Government of Canada, Parks Canada, Whitehorse	PC
5)	Government of Yukon, Department of Tourism Recreation and Cultural Resources, Heritage Branch	YTG H
6)	Government of Yukon, Department of Municipal and Community Affairs, Lands Office	YTG MC
7)	Government of Yukon, Department of Renewable Resources, Parks Planning	YTG PP
8)	Government of Yukon, Department of Renewable Resources	YTG RR
9)	Government of Yukon, Department of Tourism Recreation and Cultural Resources, Tourism Planning and Development	YTG TP

10)	Government of Yukon, Department of Renewable Resources, Wildlife Management Branch	YTG WM
11)	Northern Canada Power Commission, Whitehorse	NCPC
12)	Published Guides Available in local bookstores	PUB

Most sources listed in the bibliographies have been reviewed for this study. However, some sources which provide detailed information on specific topics, have been included for the reader's information, although they were not reviewed in detail. These reports are noted with an asterisk (*) in the bibliography.

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Volume
3

TOURISM, PARKS AND RECREATION
in the YUKON RIVER BASIN

Descriptive Synthesis

VOLUME III: Appendices

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APPENDIX I

Recommendations from the "Wilderness/Adventure Travel Study. Industry Overview and Development Strategy"

Thorne, Stevenson and Kellogg, 1982

RECOMMENDATIONS FROM: INDUSTRY OVERVIEW & DEVELOPMENT STRATEGY

1. Resource Assessment

   (a) Recommended that the quality of Yukon's product be assessed as follows:

      (i) for selected wilderness travel activities within Yukon, assess the resources to identify those areas with the highest quality, and undertake capacity analysis of such areas; and

      (ii) assess the quality of the resources in competing jurisdictions to see how they compare with those of the Yukon Territory.

   (b) Recommended that two complementary methods of assessment be followed:

      (i) objectively, by a resource planning firm, to obtain an evaluation of the quality and capacity of wilderness areas; and

      (ii) subjectively, by key influentials within specific activities, to evaluate the quality of the resources in Yukon for their specific activity both intrinsically and by comparison with competing destinations, to produce publishable opinions.

   Benefits:

      (a) objective assessments of resource quality and capacity, for use in management, development and marketing;

      (b) subjective assessments suitable for marketing;

      (c) identification of areas of conflict between actual or potential competing uses and tourism.

2. Market Development Strategy

   Recommended that the strategy for the further development of the wilderness travel industry of Yukon have four components:

A. **Component #1:** A "Come to Yukon for a long term (ie. one night or more) Wilderness Experience Tour" Sub-Strategy.

Objective: To actively encourage more non-residents who frequently participate in wilderness related activities to purchase long term guided wilderness experience tours in Yukon.

(a) Recommended that emphasis be on developing tours offering wilderness skills, backpacking/hiking and river related travel, since these types of tours should capitalize on the two main strengths of the Yukon's product -- the knowledge and skills of the guides, and the high quality of the Territory. The primary river-related activity should be canoeing, due to the high levels of competition and investment involved in river rafting and river boat tours.

(b) Recommended that a medium/premium price strategy be used.

(c) Recommended that to generate more first time visitors, YTG encourage Yukon operators to work much more closely with the travel trade (wholesale and retail) in prime market aras.

(d) Recommended that Yukon's prime market areas for wilderness tourism be Western U.S.A. and Western Europe, specifically affluent, upscale people. Secondary markets are British Columbia, Alberta, Eastern Canada and Eastern U.S.A..

(e) Recommended that the level of awareness of Yukon by target markets be raised as follows:

(i) create interest, particularly amongst specialty wholesalers and ultimate consumers.

- by providing to wholesalers:
  - comprehensive and factual information
  - comparative and credible information on the quality of the resource
  - fast and accurate responses
  - familiarization trips
- by raising the level of awareness of consumers with general information of a comparative nature about the quality and availability of Yukon's resources for their activity, through:

- articles in specialty magazines
- promotional films, video cassettes
- direct mail pieces

(ii) stimulate interest

(iii) respond to enquiries - using activities specific brochures intended to differentiate Yukon from other equally feasible destinations for the particular activity.

(iv) consummate purchase

(v) provide high quality experience

(vi) stimulate word of mouth recommendation.

B. Component #2: A "While you're Here Take a Guided Wilderness Experience Tour" Sub-Strategy.

Objective: To actively encourage those non-residents already visiting Yukon and who are interested in or are participating in wilderness related activities, to purchase short term guided wilderness experience package tours.

(a) Recommended that since these will be spontaneous purchases, that the activities offered be strongly focused on wilderness skills and photography through short term (one day) tours. These activities are best suited for this segment of the market since they significantly enhance the quality of their visit to Yukon in the shortest period of time.

(b) Recommended that such tours be priced at a medium/competitive level, the intention being to convince the visitor they could see a lot more of the real Yukon in a lot less time by using the services of a guide. A value element can be promoted through a "pay a little to see a lot" theme.

(c) Recommended that a three part approach be used to inform potential users of such tours:

(i) provide general details of types of trips offered in prevacation planning kits;

(ii) provide literature through visitor information centres, service stations, commercial accommodation and shops to travellers in Yukon;

(iii) establish a walk-in clearing house for handling enquiries and bookings on behalf of operators in the general region.

(d) Recommended that focus be on advertising in Yukon itself and producing a comprehensive brochure describing the range and variety of services available, to persuade the tourist to make an unplanned purchase and to stay over an extra day in doing so. In addition, individual operators' brochures describing their short-term tours should be available.

C. Component #3: A "Yukon has the services and equipment you need" sub-strategy.

Objective: To actively encourage non-residents who frequently participate in wilderness-related activities to purchase "facilities" packaged wilderness experience tours in Yukon.

(a) Recommended that focus be on further developing river related facilitation packages, since:

(i) Yukon rivers are long enought to easily plan 7 - 10 day trips;

(ii) such trips appeal to a broad segment of the market interested in wilderness travel activities;

(iii) it is often impracctical for tourists to bring the necessary equipment over long distances;

(iv) self-guided river trips offer experience levels reasonably close to guided trips, unlike many other forms of wilderness trips.

(b) Recommended that such facilitation packages be priced competitively, given that convenience and price are the two factors on which a tourist would base a buy decision.

(c) Recommended that high quality equipment be used, since the quality of the offering is based solely on the quality of the resource and of the equipment, since a guide is not involved. A quality experience encourages word of mouth advertising.

(d) Recommended that facilitiation packages be designed to be sold through specialty wholesalers and retailers in major markets. This requires pre-set rental periods, equipment packages and package prices.

(e) Recommended that the emphasis be on similar markets, and that similar promotional and advertising methods be used as suggested for the long term guided wilderness experience tours.

D. Component #4: A "Learn more about your home Territory" Sub-Strategy.

Objective: To actively encourage more residents of Yukon who frequently participate in wilderness related activities to purchase both short and long term guided wilderness experience packaged tours in the shoulder season.

(a) Recommended the sub-strategy be aimed both at residents, many of whom are only here for a few years, and at the friends and relatives who visit them.

(b) Recommended that such tours be priced medium/competitively.

(c) Recommended that Whitehorse be the main target.

(d) Recommended that the clearing house be the main centre to handle residents' enquiries and reservations for short term guided tours. This will require the centre to have a long operating season, with the possibility that it should also handle a winter activity bookings as well. Since Whitehorse is a year-round centre, this may be feasible.

(e) Recommended that advertising and promotion be locally oriented, using a combination of local radio and newspaper advertising complemented by new brochures to respond to enquiries generated.

3. Organizational Structure and Roles

Objectives: Basically, to have the wilderness travel segment of Yukon's tourism industry develop further.

(a) Recommended that YTG plays a major role for a number of years to present a coordinated and comprehensive campaign which first stimulates market interest in Yukon and then stimulates interest in purchasing wilderness travel tours.

(b) Recommended that the YVA and operators themselves, given that they don't have the resources to undertake a major campaign, support YTG through the provision of complementary materials and services.

(c) Recommended that YTG be responsible for:

- assess wilderness resource quality and capacity in terms of wilderness travel activities.
- develop promotional campaigns targeted at wholesalers, retailers and the general consumer with the objectives of raising their general level of awareness of Yukon's wilderness travel product.
- fund familiarization trips for key influentials to allow them to assess the resource and publicize their assessment.
- develop a consistent series of complementary brochures oriented towards specific activities.
- explore feasibility of restricting or controlling non-Yukon based operators offering tours in Yukon.
- explore feasibility of training and licensing guides.

(d) Recommended that the role of the Yukon Visitors Association be strengthened and that the individual associations work much more closely with the YVA.

(e) Recommended that a further objective is to develop a high quality experience using existing manpower, on the assumption that current manpower is under utilized. The quality aspect should be consistent for all aspects of the product being offered, ie.: the resource, the guides, the equipment and the marketing and promotional tools. It is critical therefore that the guides involved in offering these tours be recognized by the market to be of the highest quality.

(f) Recommended that some form of licensing of guides should be considered to ensure that adequate standards are being met, and to demonstrate to the marketplace that the guides are of an appropriate quality. This licensing should be introduced once demand for guiding services begins to exceed the present capacity of the industry to meet this demand.

(g) Recommended that the industry associations themselves be responsible for policing their members in terms of ensuring they have adequate skills.

4. Resource Protection

(a) Recommended that plans should begin to meet expected rapid increase in demand for river oriented tours and on trips using trails into the mountains. The resource is not yet compromised, allowing time to ensure that it can be protected prior to the mid - late 1980's when absolute growth in demand is predicted to increase quite quickly.

(b) Recommended that each river felt to have potential for developing river related tours be fully surveyed and that designated camping areas be identified and developed. YTG, together with the Department of Indians and Northern Affairs, should assume responsibility for this.

(c) Recommended that the Department of Renewable Resources, together with the Department of Indian and Northern Affairs identifies the optimal areas and capacities for the further development of backpacking/hiking and widlerness skills activites.

(d) Recommended that the impact of the further development of wilderness travel tourism on the Yukon's resources be carefully planned for prior to demand increasing significantly.

5. Plant and Infrastructure Requirements

(a) Recommended that, as part of offering a consistently premium product, all equipment related to the tour itself should be of the highest quality. The operators know which equipment is most appropriate for their market's needs, but their historically low cash flows may not let them purchase it.

(b) Recommended that the YTG determine, by means of consultation with the various industry associations (the YAWG, YMGA and YOA), the minimum range and quality of equipment necessary to service the tourists they are selling to. Should the guides' equipment fall short of these minimum standards, the YTG should make low cost loans available to operators to upgrade their equipment to meet these standards.

(c) Recommended that the YTG determine the appropriate transportation requirements of the various operators and make low cost loans for them to upgrade the quality of their transportation services.

(g) Recommended that in order to compromise between "adventure" and "safety", Yukon survey its market carefully, probably by means of focus groups, to determine how far it can go in attempting to protect its clientele.

7. Allocation of Program Responsibility

(a) Recommended that the following are the primary responsibility of the YTG Department of Tourism, with the possibility of joint funding with the Government of Canada:

- (i) familiarization trips for agents, wholesalers, and key influentials;
- (ii) activity brochures;
- (iii) promotional films;
- (iv) local and major marketing advertising;
- (v) establishment of the 'clearing house';
- (vi) greater assistance to the YVA;
- (vii) low cost loans for equipment and vehicles.

(b) Recommended that the YTG Department of Renewable Resources, again with the assistance of the Government of Canada, have responsibility for undertaking some of the necessary further studies. These would include:

- (i) a study to identify the quality and capacity of Yukon's resources for the development of wilderness travel activities.

- (ii) an assessment of the feasibility of introducing a permit system for access to certain (ie. prime or environmentally sensitive) areas of Yukon;

- (iii) an assessment of appropriate safety regulations for the wilderness travel industry.

6. Legislation: Resource Protection and Client Safety

(a) Recommended that YTG together with the Federal Government, explore alternative options with regard to regulating access to Yukon's wilderness, to ensure that Yukon's resource is not compromised by too rapid development, specifically in areas deemed environmentally fragile.

(b) Recommended that legislation be developed based on an assessment of the feasibility of limiting access to environmentally sensitive areas, and that licensed guides be allocated a certain number of permits each year to access those areas felt to be in danger from over utilization. These limits should apply equally to the river systems of Yukon. Permits for several areas should be granted to hunting parties and wilderness skill groups.

(c) Recommended that, at this stage in the development of Yukon's industry these permits should only be made available to residents of Yukon, only to those who have met certain minimum standards in guiding. The implication is that prime (environmentally sensitive) areas shoud have controlled access, and that access should only be permitted for Yukon based operators. It does not mean that non-Yukon based operators are barred unilaterally, but it does mean that they would not have access to the prime (environmentally sensitive) areas of Yukon.

(d) Recommended that appropriate legislation be drafted to ensure that visitors' safety is not jeopardized unduly by the purchase of a guided or non-guided wilderness travel package. This implies that the guides must meet certain minimum standards of knowledge and understanding of Yukon's unique environment. Hence the importance of training and licensing.

(e) Recommended that Yukon explore the feasibility of determining the degree of experience of any group leader prior to any non-guided tour taking place. Unless a group tour leader has a minimum level of wilderness experience, the group should be required to employ the services of a licensed guide. The greatest impact would be on facilitation packages, as well as on independent travellers, who should be made well aware of such a requirement prior to holding such trips.

(f) Recommended that booklets which describe in full how to survive in Yukon's wilderness be prepared, and that tourists be familiar with the contents of such booklets prior to participating in a tour.

APPENDIX II

Summary and Recommendations from Tourism Development Plans for;

A)	Atlin Region:	from The Yellowhead 16 Tourism Region Tourism Development Strategy Province of B.C. and Government of Canada.
B)	Dawson:	from Tourism Development Plans for Dawson, Whitehorse and the Kluane Region. Government of Yukon, Department of Tourism, Recreation and Culture
C)	Whitehorse:	
D)	Kluane Region:	

A. ATLIN AREA

The following activities are just a few of the many opportunities available to tourists and for promotion by Atlin: wilderness canoeing, kayaking and mountain climbing; picnicking, nature study walks, scenic viewing, photography; fishing and hunting; and the diverse historic and cultural features of the area.

1. Develop a tertiary level tourism plan that is co-ordinated with the Southern Yukon Study.

2. Promote the tourist attractions and services not only for Atlin, but for the regional resources as well.

3. Develop management guidelines to protect the significant natural resources and to restore and conserve the historical and cultural features of the community in light of future resource problems.

4. Continue the support and enforcement of community design and aesthetics for a historical setting in the period of 1898 to 1910. Promote the salvage and stabilization of heritage resources such as the sternwheelers (eg. Tarahne) and historic buildings, by creating a heritage restoration fund from resource development royalties.

5. Develop high quality roofed accommodations and food services to meet the demands for exclusive speciality groups. The design of facilities should be coordinated with the Atlin's architectural theme.

6. To support the existing historic theme for Atlin, organize summer events (Heritage Days).

7. Upgrade public campgrounds at the north end of the village to provide electrical hook-ups, sewage disposal system and an information centre to disseminate interpretive information about the area.

8. Promote the involvement of the Atlin Native Indian Band and local residents in Atlin and the surrounding area. The continuation and expansion of local arts and craft establishments should be encouraged.

9. Expand and promote the fly-in wilderness and hunting package trips by promotional brochures at camping equipment suppliers.

Atlin Wilderness Provincial Park

In 1973, the British Columbia Parks Branch designated much of the mountainous icefield and Llewellyn Glacier as a wilderness park. When the long range master planning for the park is completed, certain small scale developments will attract increasing numbers of visitors arriving from southern British Columbia.

1. Develop pull-off areas with picnic tables, garbage cans, and interpretive signs. The design of these facilities should be coordinated with the Atlin-Yukon Highway corridor.

2. Expand the guided/outfitting charter services in Atlin to include glacier climbing, water access scenic tours and establish fly-over tours.

Bennett-Whitehorse-Haines Junction-Skagway Loop Tour

An increasing multi-mode loop tour in northwestern British Columbia involves travel in the State of Alaska, Yukon Territory as well as in two separate sections in British Columbia.

The route could involve an historic ride on the White Pass and Yukon Railroad, a hike through Klondike Gold Rush National Park, bus or car travel in the Yukon Territory from Bennett, British Columbia and along the Alaska Highway through Whitehorse to Haines Junction. The route continues south along Highway 3 in the Yukon and into British Columbia along Highway 4 and over Guardsman Pass. This high mountainous region includes a number of glaciers and snowfields and provides excellent opportunities for scenic viewing of wildlife. The southern portion of the loop passes through the State of Alaska (Highway 7) to Haines. From this point, the tourist must travel by ferry up Taiya Inlet to Skagway.

Chilkoot/White Pass International Heritage Trail

Skagway was and still is the "Gateway to the Klondike". In July, 1897, the first steamboat delivered prospectors to Skagway on their way to the Klondike Gold Rush. From Skagway and Dyea, a 56 km well marked trail to Bennett has been established as the Klondike Gold Rush National Historical Park by the U.S. National Park Service. Although most of the economic spin-off effects will occur in Skagway, there are future opportunities at Bennett.

1. Public agency cooperative planning efforts are urged to develop a cooperative management program of the historical resources of the gold rush era so that the international aspects of this tourism attraction can be realized.

2. Develop campsites in the British Columbia section of the trail with only minimum facilities; and coordinate planning with the United States Department of the Interior.

3. Restore the historic village at Bennett to act as the terminal point of the trail. This should be undertaken with the support and involvement of the local community.

White Pass and Yukon Route Railroad Klondike Historic Corridor

(Note: The White Pass and Yukon Route Railroad closed in 1982, and it is unlikely that it will reopen in the near future.)

The White Pass and Yukon Railway is a narrow gauge privately owned railway which links Skagway, Alaska, with Whitehorse, Yukon Territory. Although the railway was originally designed to open up the mining riches of the klondike and to aid in transportation of the men and supplies for the gold rush in 1898, today it is used for the shipment of freight and mining concentrates. With the completion of a parallel highway its continued economic viability is in doubt. Its tourism potential comes from the 50,000 visitors it takes on the '98 trail. On the way to Whitehorse, the train stops at Bennett for lunch. In addition, special excursion trips operate from Skagway to Bennett and return to cruise ship charters established in the Alaska corridor. A separate loop tour, as outlined in Section 6.4.34, includes the White Pass corridor in a travel loop through British Columbia, the Yukon Territory and Alaska. As previously noted, the following concepts should be examined in a systems approach to tourism planning in concert with proposals in the southern Yukon.

1. Develop high quality accommodation and food services to encourage the cruise ship clientele to extend their visit at Bennett.

2. Schedule major Klondike activities to coincide with cruise ship tour arrivals.

3. Develop and upgrade non-roofed camping facilties near Bennett to take advantage of the wilderness hikers on the Chilkoot/White Pass Heritage Trail.

4. Prepare a conceptual plan for a Pioneer Square Visitor Centre as part of a complimentary unit with the United States Department of the Interior. The community should be involved in the planning, construction and operation of the Centre.

Tatshenshini Wilderness River
(Outside of the Study Area)

The Tatshenshini River, in extreme northwestern British Columbia, is currently receiving heavy use during July and August for commercially operated river rafting. The river has become, in recent years, internationally renowned for its excellent water conditions for rafting and for spectacular mountain landscapes of the St. Elias and Alsek Ranges through which the river passes. It should be recognized that the trip commences at a known access point near Highway 3 in the Yukon Territory, passess through British Columbia and terminates at a tidewater site on the Pacific in the State of Alaska.

At the present time the Tatshenshini River is heavily used by rafters and the trip is approximately 10 days in length covering over 200 km. A recent survey indicated there were over 15 American outfitters using the Tatshenshini River.

1. Designate by federal, provincial and state statute a river management program for the protection of the Tatshenshini River.

2. Manage the river and its surrounding landscapes (especially access and egress points) with special land use controls so that adjacent activities and developments do not detract from the river running experience.

3. Establish recreational and bio-physical carrying capacities to ensure the continued use and appeal of the river for both commercial and public users.

4. Ensure licensing of all operators on the river.

B. Dawson

Amended Selected Strategy

Characteristics

1. Resource Preservation/Development

The strategy calls for a very high degree of authenticity and great attention to historic detail, although absolute authenticity may be sacrificed in rehabilitiating historic sites for modern functions which may or may not be tourism related.

2. Selected/Diversity of Themes

The strategy emphasizes all aspects of the Gold Rush theme, but also provides for the interpretation of their historical and natural themes based on interesting and unusual natural, cultural and historical resources. These themes may include native history and culture, paleontology, mining history and technology, natural history, etc.

3. Concentrated/Dispersed Developments

Implementation of the selected strategy will encourage development and tourist activity wherever there is an appropriate resource to support it, although commercial development would continue to be encouraged in the commercial core of Dawson City.

4. City/Regional Focus

The selected strategy encourages the development of tourism opportunities wherever suitable resources exist, within town but also encourages development of and visitation to outlying areas including the gold fields, Moosehide, Bear Creek and the Gold Rush suburbs.

5. Stabilization/Use - Rehabilitation

Great emphasis will be placed on stabilization and authentic restoration of all historic resources. Rehabilitiation however should endeavour to return historic resources to a useful condition and to a state of good repair.

6. Authenticity/Simulation

No simulated historic developments are intended, although architectural styles and streetscapes in general should be compatible with historic features and contribute to the overall historic ambience. Wherever possible, the historic function(s) of historic sites should be revised.

7. Participatory/Observatory

Attractions developed according to the selected strategy will be both observatory and participatory in nature. The relatively passive activities associated with viewing and interpretation of historic resources will be accompanied by opportunities for more active participatory activities including boating, rafting, hiking, climbing, gambling, etc. Traditional and historic activities including festivals, competitions, races, picnics, fancy dress balls, etc. are also encouraged.

8. Complementary to Non-Recognition of Lifestyles

Tourism developed according to this strategy will be compatible with local lifestyles as development and tourist activity will provide and encourage opportunities for local participation in the tourism industry. Restrictions to private development and traffic circulation could be implemented in order to facilitate, encourage and support tourist activity and development. Historic buildings should be used to serve the needs of residents in addition to serving as attractions for tourists.

9. Market/Resource Orientation

The selected strategy creates a tourism industry which utilizes the potential of all the region's resources adapted and developed as required to meet market demands.

10. Seasonal/Year Round Tourism Industry

This strategy extends the tourism season to include late spring and early fall by diversifying activity opportunities and by developing attractions which are not heavily dependent upon the retention of seasonal personnel. Tourism activity will, however, continue to be more intense during the peak summer season.

11. Selected Target/Broad Range of Markets

This strategy is designed to attract a broad range of markets.

12. Market Reaction/Creation

Markets attracted to Dawson City as developed by the selected strategy will include some of the same market groups that visit

Dawson City now, but will also include untapped or under utilized market groups (eg. adventure travel groups, special interest groups, rafting enthusiasts, campers, etc.)

13. Controlled, Programmed, Structured/Unstructured Tourism

Implementation of the selected strategy will result in a relatively unstructured form of tourism, allowing tourists to visit points of interest at their own pace and inclinination, but offering opportunities to participate in more structured tours and activities if so desired.

14. Individual/Group - Package Travel

The strategy will encourage both group package and individual travel in an effort to realize a diversified, viable tourism industry.

15. Individual/Private Sector Planning and Development

The strategy calls for a combination of public and private participation in tourism development. Public agencies will firstly have primary responsibility for restoration and stabilization efforts associated with historic resources, secondly for providing incentives for private sector efforts and thirdly for organizational efforts associated with implementation of the Tourism Strategy. The private sector will have primary responsibility for the development of commercial attractions, facilities and services for tourists.

16. Public/Private Sector Funding

The high cost of historic restoration called for by the strategy demands a correspondingly high level of public sector financial and technical assistance. However, the strategy encourages a significant measure of private investment associated with the development of tourist attractions, facilities and services.

17. Public/Private Sector Management and Operation

The high level of public sector investment required for strategy implementation calls for a relatively high level of continuing government managerial supervision. However, day to day management of tourism attractions, facilities and services will eventually be predominantly the responsibility of the private sector.

18. Strict Legislation/Voluntary Compliance

The emphasis of this strategy on authenticity in the restoration of Gold Rush era buildings, streetscapes and artifacts, and the need to develop tourism in a manner compatible with other industries as well as a permanent residential population, necessitates the establishment and strict enforcement of regulatory legislation and guidelines.

19. Imported/Local Management and Operation

The strategy emphasizes the employment of local individuals and associations in the management and operation of tourist attractions, facilities and services. However, where suitable expertise is not available locally, outside managerial assistance will be obtained.

C. Whitehorse

Executive Summary

Introduction

The purpose of this study was to provide a plan to change Whitehorse from a tourist service centre to a tourist destination.

The study is a follow-up to recommendations made in the Yukon Tourism Development Strategy (1978), with elaboration upon and coordination of many suggestions from the community for a variety of developments.

The study investigated several development proposals, explored the general feasibility of these proposals, and now suggests what should be done in order to prepare detailed implementation plans for a number of concepts.

The concepts originally suggested for study included: a transportation/communications theme attraction, waterfront redevelopment, an historic village, a visitor reception centre, the Yukon Historic and Recreational Waterway, convention facilities, and downtown beautification. Although other concepts were mentioned for consideration, the intent of the study was to concentrate on the downtown and waterfront areas.

Shortly after the study commenced, the Canadian and Yukon Governments signed an interim tourism development agreement. This agreement caused shifts in objectives and approach, and also provided new opportunities.

Fundamental principles, goals and methods were established early in the study.

Residents as well as tourists were considered to be important markets in the development of the plan.

The goals were to reverse environmental degradation, enhance the attraction of Whitehorse and retain and improve the economic vitatlity of the city's core.

The methods to achieve these goals include creating an appealing image, increasing the density and the variety of functions in the city core, domesticating or better controlling the automobile and its domination of core land spaces, creating an attractive environment for walking, and preserving and enhancing culture and the natural environment.

Downtown Revitalization

Whitehorse, like most northern communities, has seen boom and bust development. The prime purpose of construction in the early years was utility. As a result, there is little to differentiate Whitehorse, its layout or its buildings from a score of similar sized communities in Western Canada.

The core area requires a comprehensive downtown re-development program with considerable public involvement in order to articulate the goals of residents and businesses. The experience of successful and failed re-development programs in other communities should be examined.

This process would help to ensure that the community and planners develop an overall downtown plan which best suits Whitehorse.

Establishment of a Business Improvement Area is considered essential for revitalizing downtown. Related recommendations include beautification, traffic and parking improvements, pedestrianization and a cooperative marketing approach.

Old Whitehorse

Our investigation of the heritage village concept determined that, for a relatively young community, Whitehorse has a rich untold history. Residents are now aware that many of their old landmarks have been lost due to re-development and modernization.

The primary purpose of a heritage village would be to preserve about 40 historically significant old buildings of Whitehorse, as well as meeting educational and commercial objectives.

Entrepreneurs should have reasonable chances of success with a number of the suggested business opportunities, but re-using small residential homes for commercial purposes requires considerable imagination and ingenuity to successfully maintain them as viable parts of the downtown community.

The location for Old White Horse was a major issue we addressed. There is not a good cross section of old buildings and there are very few public buildings surviving from the early days. The expectations of visitors and businessmen would be unrealistically high for a "village".

Wherever possible, therefore, the significant buildings should be left as they are, marked with a discreet plaque. These should then be identified in a walking tour brochure. Only if threatened should they be moved to Old White Horse.

The site we recommend is the west end of Main Street near the escarpment and the escarpment itself could be a significant attraction if the stabilization program continues. Improvements could start near Main Street with a retaining wall, if necessary, to protect the Old White Horse buildings.

The slumping process and the measures being undertaken to stabilize the escarpment should be interpreted and publicized. We suggest establishing footpaths along the base of the escarpment and a stairway to the top with intermediate rest stops at appropriate viewpoints overlooking the city, the Whitehorse Dam and upriver.

If access to the escarpment is at the base of Main Street, visitors would be attracted there, to the benefit of businesses established in Old White Horse.

A number of the older public buildings sited around Whitehorse, such as the Chamber of Commerce, the Chamber of Mines and the log church, should establish exhibits telling of their contribution to the story of Whitehorse.

Waterfront

The river is one of the most attractive and accessible natural attractions Whitehorse has to offer. Its accessibility, however, is somewhat restricted by both the railway track and existing development, particularly north of the station. We concentrated, therefore, on the opportunities between the MacBride Museum and the S.S. Klondike.

The objectives and constraints of the Waterfront Development Plan prepared by the City Planner were adopted as a basis for this work with the addition of three new objectives, to: ensure free and easy access to the river; limit construction to ensure optimum visibility of the river; and to work with the railway without disrupting its operation.

Pedestrian access is a key element in re-developing the waterfront. We recommended closing First Avenue between the YTG Buiding and the MacBride Museum. This street space would help overcome problems of parking and would allow generous space for a cycling path/cross-country ski trail together with an enhancement of the area for parks, playgrounds and other open space land uses.

To add further to the available riverbank space, piers and boardwalks should be built along major sections of this area. The old riverboat, Neecheah, could possibly serve as a "floating" restaurant along the waterfront, since food service is going to be an important ingredient in the success of the waterfront's visitor holding power.

The Robert Campbell Bridge underpass should be widened and improved.

A cycle path should extend from downtown to Whitehorse Dam, cross it, continue through Riverdale while staying as close as possible to the river, and then back across the Robert Campbell Bridge.

The parking and traffic problems should be overcome along the waterfront by the closing of First Avenue and creating cul-de-sacs where the streets intersect.

A three-level parking garage in the general area of the YTG Building may be justifiable. An open parking area for RV's is needed.

Existing structures along the waterfront can help interpret the theme. The MacBride Museum property can cover part of the communications story (eg. the telegraph station), and the railway depot can focus on interpreting the railway story.

Because of their ideal location, either the station or the fire hall should be used as the visitor reception centre.

The theme attraction building's location is somewhat contentious. We recommend Rotary Park as the best choice, but there are two other possible sites. This particular issue requires additional public discussion before the decision is finally taken.

Visitor Reception Centre

The importance of proper visitor reception cannot be over emphasized, and at present what Whitehorse offers is quite inadequate. Several agencies offer reception services for tourists but these services are not integrated to meet the needs of this market. Coordination of the various groups' efforts is needed to avoid duplication and gaps. The centre should be near the business area and the waterfront, clearly visible and easily accessible when entering Whitehorse. The best site of all would be the railway depot, with the old fire hall immediately adjacent to the railway depot as second choice. (Note: A downtown Visitor Reception Centre was completed in 1983.)

Transportation/Communication Theme Attraction

The story of northern transportation and communication is rich, varied and exciting, deserving better interpretation and presentation to both residents and visitors. A theme attraction based on the transportation/communications story should be the centrepiece of Whitehorse tourist activity. We recommend that the community begin with existing attractions, services and facilities in order to get an immediate start on and to generate public interest and support to ensure that this keystone development will go ahead.

The importance of the planning process for the theme attraction is reaffirmed. More involvement of residents of Whitehorse is necessary to develop this attraction. In similar cases of community attractions, about two years of staff and community planning was carried out before a building could be designed. Members of a community planning group should visit some of the better science and technology museums to see first-hand the options available. A working group should be established and one of its priorities should be the hiring of a well qualified project director.

Development and Management Mechanism

In the earliest stages, Old White Horse, the waterfront redevelopment and the theme attraction can all be organized by the same general working group and a single employee -- the project director. In due course, more formal structuring and operation will be necessary and may call for a Crown corporation. In the meantime, much of the work can be accomplished by volunteers and the project director.

Economic Factors

We estimated that additional expenditures attributable only to increasing the length of stay by tourists now visiting Whitehorse would total about $3.7 million per year, in 1980 dollars.

The toal cost for implementation of our recommendations is estimated to be in the range of $1.9 to $5.3 million, in 1980 dollars.

Conclusion

This study has attempted to draw together several separate studies that have been undertaken in the past. We have added to the information base and have passed on the relevant lessons from other communities dealing with similar problems and opportunities.

Public participation is necessary to prepare a tailor-made set of solutions for such varied ideas as were presented at the beginning of this study. With the enlarged information base and the ideas presented, the imagination and interest of Whitehorse residents can be stimulated.

The Whitehorse Tourism Development Plan should proceeed with community participation, cooperation and support, to develop a better city in which to live and a tourist destination centre that no Yukon visitor will want to miss.

D. Kluane Region

It is recommended that the WILDERNESS/ ADVENTURE TRAVEL INDUSTRY be the key to developing the tourism industry of the Kluane region. Within this context the following recommendations are made:

- An overall theme reflecting the wilderness/adventure travel potential be adopted and used throughout the region. The recommended theme is A LAND OF OUTDOOR ADVENTURE.

- Haines Junction be recognized officially as the major tourism service centre for the region and the community adopt the sub-theme GATEWAY TO ADVENTURE.

- A wilderness/adventure travel centre be established in Haines Junction and a financial incentives program be developed by the Yukon Government to assist in the expansion of this segment of the tourism industry.

- The expansion of tourist/commercial services and facilities along the highway corridor be encouraged only in specified locations or service nodes.

- The establishment of a community upgrading and beautification program for the communities of Haines Junction, Destruction Bay and Burwash Landing.

- The establishment of an entranceway program for the region to make visitors more aware that they are entering a special place.

- The Yukon Government and Parks Canada develop a joint interpretive program for the region that incorporates physical, cultural and historical features.

- The Dalton Trail be designated as a National Historic Trail and developed for outdoor recreational activites.

- A museum reflecting the cultural history of the region be constructed in Haines Junction.

- Silver City be restored to its original state and developed as a major tourist attraction.

- A financial assistance program be established by the Yukon Government for existing restaurant and accommodation facilities.

- Construction of major viewpoint overlooking the Shakwak Valley to be located northwest of Haines Junction.

- Restoration of Horseshoe Bay Campground to provide a major day use area in the northern section of the region.

- A financial assistance program be established to aid the arts and crafts industry.

- Upgrading of Haines Junction airstrip.

- Abandoned tourist facilities that are not historically significant (eg. gas stations) located along the highway corridors to be removed and the sites allowed to revegetate.

- Removal of highly visible sections of the abandoned Haines/Fairbanks pipeline and clean up of right-of-way within designated areas along the highway corridor.

- Existing pull-offs and rest areas be upgraded, landscaped and redesigned to reflect the wilderness characteristic of the region.

- Development of new pull-offs at selected sites within the corridor.

- Dalton Post be restored and only controlled visitor access allowed into the site.

APPENDIX III

THEME AND MAP INFORMATION FROM:

A. "A Concept Plan for the Yukon River" by Government of Yukon, Department of Renewable Resources, and Government of Canada, Parks Canada, ARC Branch, 1980.

   1. Map Information
   2. Example of Information for Development Areas.

B. "Theme and Resource Assessment Study" by Richard J. Friesen, 1978.

   List of Historic Themes and Sites.

C. "Natural History Themes and Resources Study, Yukon River, Yukon Territory," by Ramona Herrick, 1978.

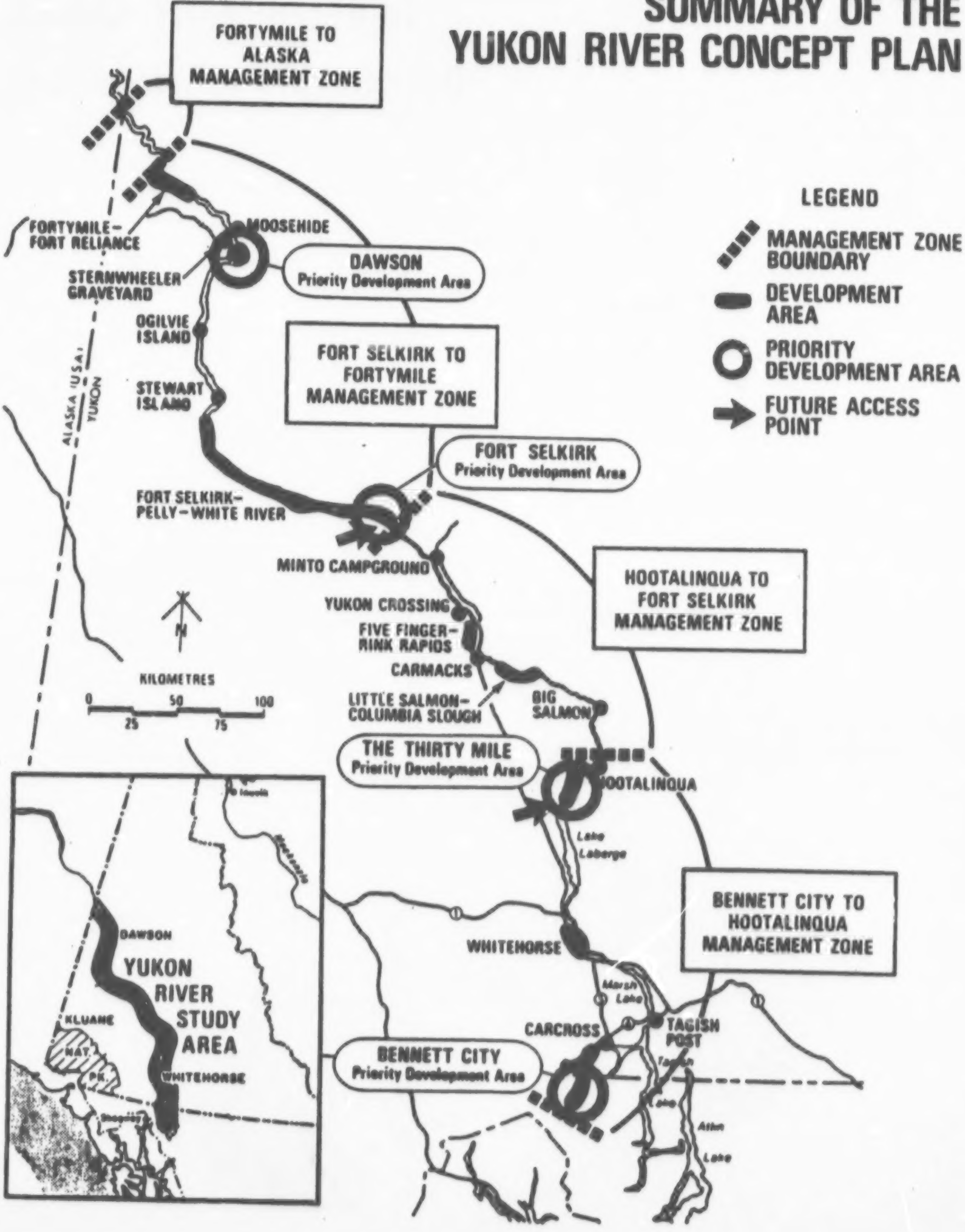
   Natural History Themes

A - 1 Map Information From "A Concept Plan for the Yukon River"

Summary of the Yukon River Concept Plan

Development Areas:	Bennett City to Whitehorse
	Lake Laberge to Minto
	Fort Selkirk to Dawson
	Dawson to Alaska

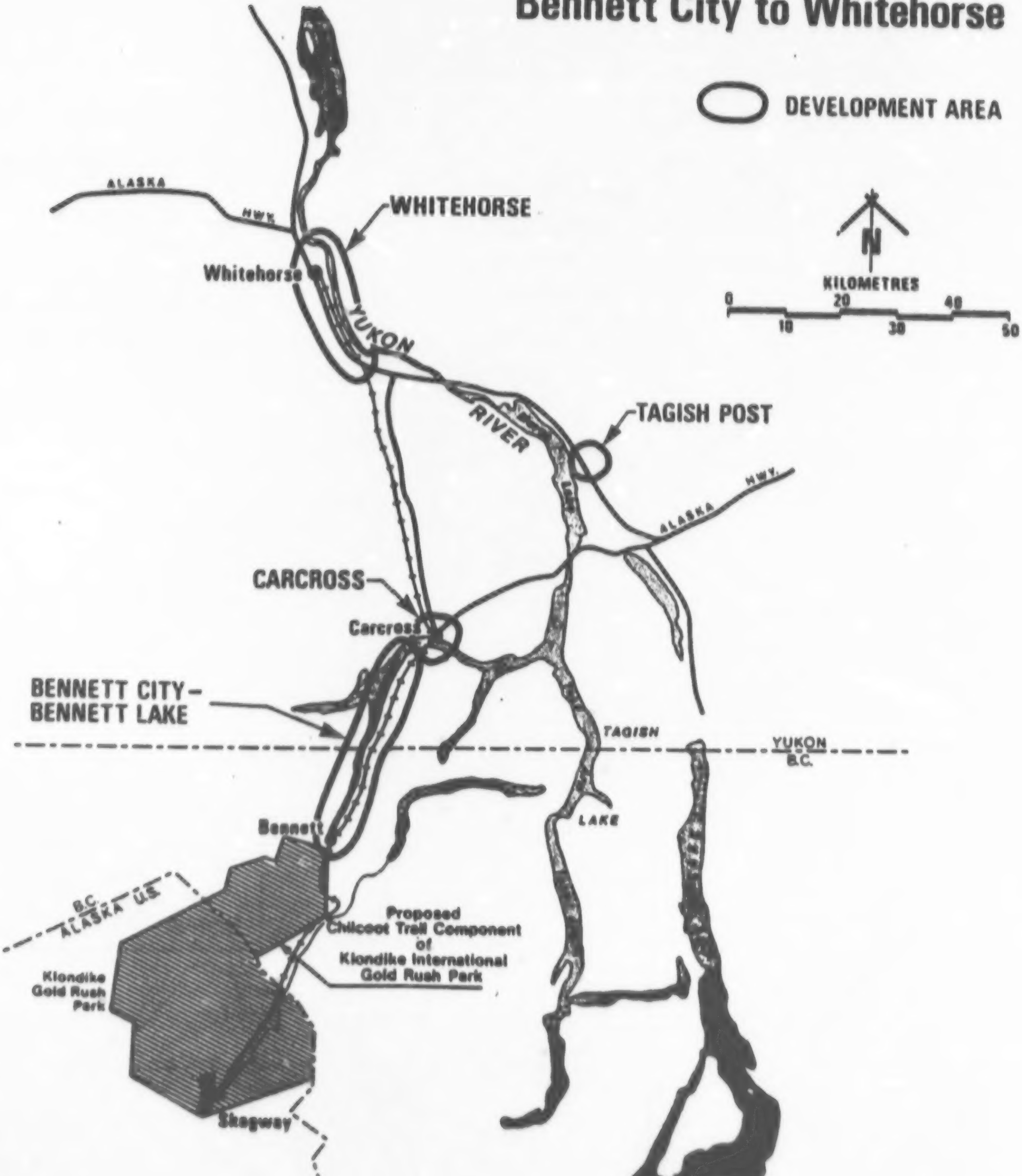
SUMMARY OF THE YUKON RIVER CONCEPT PLAN



FORTYMILE TO ALASKA MANAGEMENT ZONE
LEGEND
MANAGEMENT ZONE BOUNDARY
DEVELOPMENT AREA
PRIORITY DEVELOPMENT AREA
FUTURE ACCESS POINT
FORTYMILE-FORT RELIANCE
MOOSEHIDE
DAWSON Priority Development Area
STERNWHEELER GRAVEYARD
OGILVIE ISLAND
STEWART ISLAND
ALASKA (USA) YUKON
FORT SELKIRK TO FORTYMILE MANAGEMENT ZONE
FORT SELKIRK Priority Development Area
FORT SELKIRK-PELLY-WHITE RIVER
MINTO CAMPGROUND
HOOTALINQUA TO FORT SELKIRK MANAGEMENT ZONE
YUKON CROSSING
FIVE FINGER-RINK RAPIDS
CARMACKS
N
KILOMETRES
0
25
50
75
100
LITTLE SALMON-COLUMBIA SLOUGH
BIG SALMON
THE THIRTY MILE Priority Development Area
HOOTALINQUA
Lake Laberge
BENNETT CITY TO HOOTALINQUA MANAGEMENT ZONE
WHITEHORSE
Marsh Lake
CARCROSS
TAGISH POST
Tagish
Lake
Atlin
Lake
BENNETT CITY Priority Development Area
Inuvik
Mackenzie
DAWSON
YUKON RIVER STUDY AREA
KLUANE
NAT.
PK.
WHITEHORSE
Skagway

DEVELOPMENT AREAS

Bennett City to Whitehorse


DEVELOPMENT AREA
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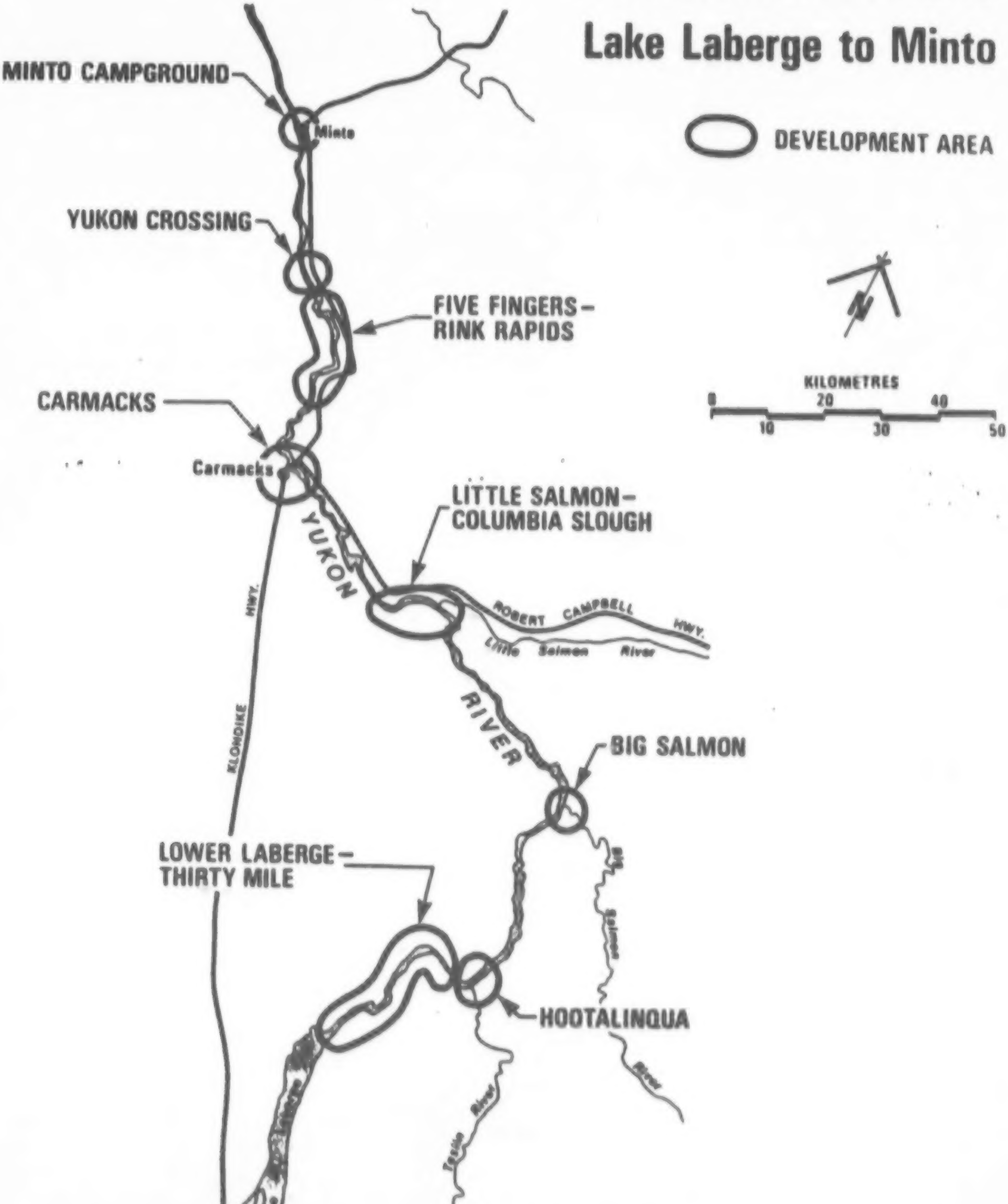
KILOMETRES
0
10
20
30
40
50
ALASKA HWY.
WHITEHORSE
Whitehorse
YUKON
RIVER
TAGISH POST
ALASKA HWY.
CARCROSS
Carcross
BENNETT CITY-
BENNETT LAKE
TAGISH
LAKE
YUKON
B.C.
Bennett
B.C.
ALASKA U.S.
Proposed
Chilcoot Trail Component
of
Klondike International
Gold Rush Park
Klondike
Gold Rush
Park
Skagway

DEVELOPMENT AREAS
Lake Laberge to Minto


DEVELOPMENT AREA
MINTO CAMPGROUND
Minto
YUKON CROSSING
FIVE FINGERS-RINK RAPIDS
N
KILOMETRES
0
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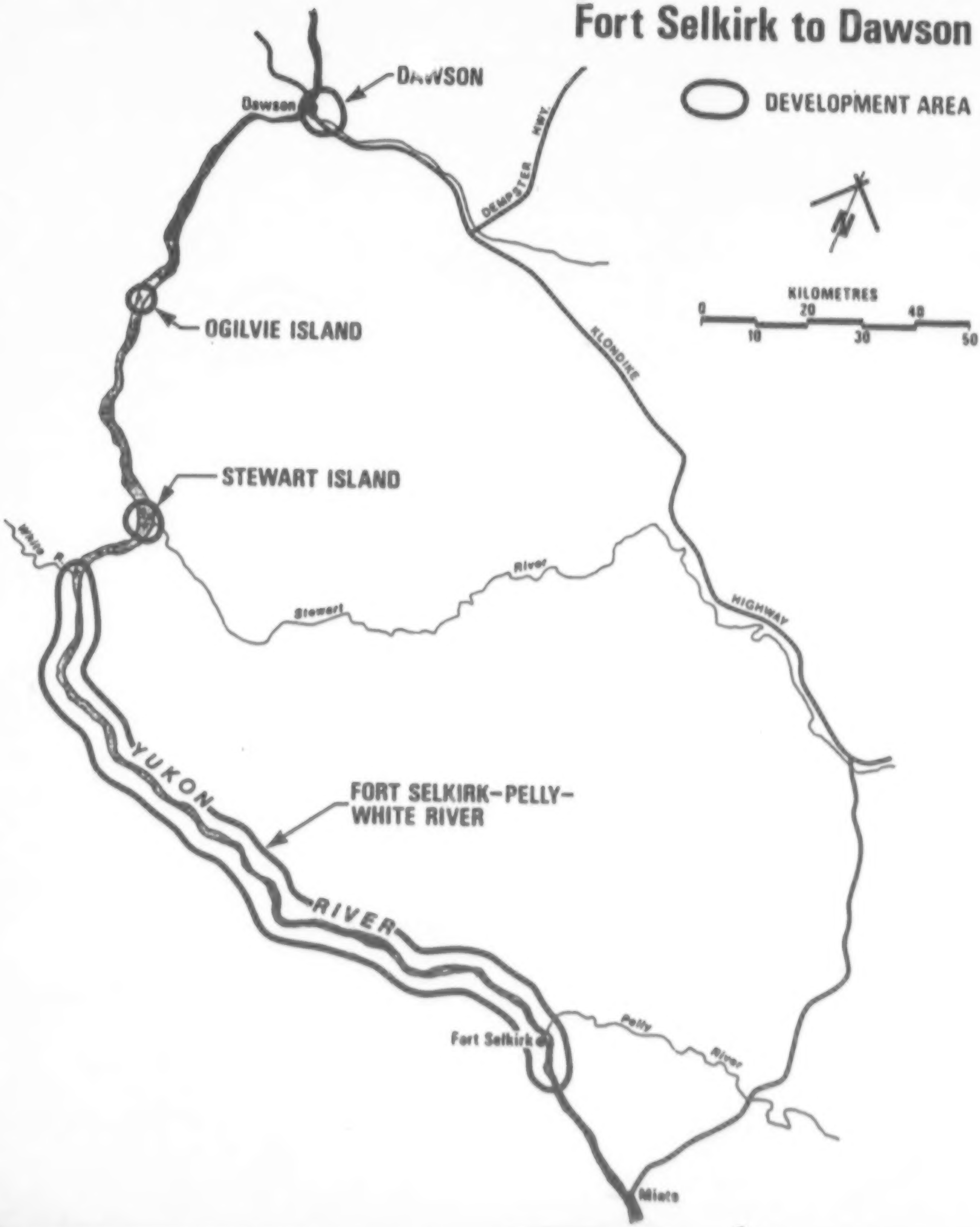
40
50
CARMACKS
Carmacks
LITTLE SALMON-COLUMBIA SLOUGH
YUKON
RIVER
ROBERT CAMPBELL HWY.
Little Salmon River
KLONDIKE HWY.
BIG SALMON
Big Salmon River
LOWER LABERGE-THIRTY MILE
HOOTALINQUA
Teslin River
ALASKA HWY.

DEVELOPMENT AREAS

Fort Selkirk to Dawson


DEVELOPMENT AREA
N
KILOMETRES
0
10
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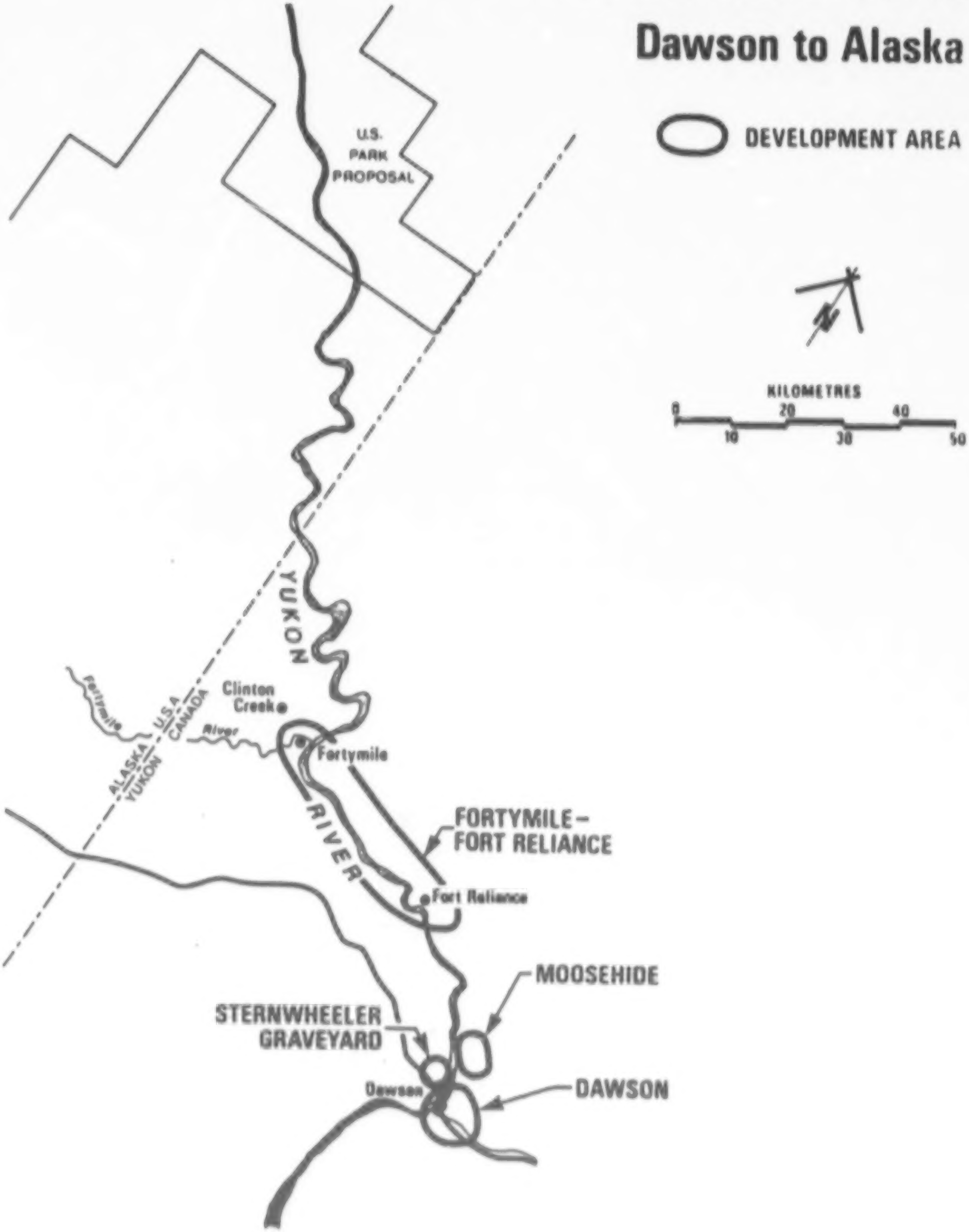
DAWSON
Dawson
DEMPSTER HWY.
KLONDIKE
HIGHWAY
OGILVIE ISLAND
STEWART ISLAND
White R.
Stewart
River
YUKON
RIVER
FORT SELKIRK-PELLY-
WHITE RIVER
Fort Selkirk
Pelly
River
Minto

DEVELOPMENT AREAS

Dawson to Alaska


DEVELOPMENT AREA
U.S.
PARK
PROPOSAL
N
KILOMETRES
0
10
20
30
40
50
YUKON
RIVER
Fortymile
River
Clinton
Creek
Fortymile
ALASKA
YUKON
U.S.A.
CANADA
FORTYMILE-
FORT RELIANCE
Fort Reliance
MOOSEHIDE
STERNWHEELER
GRAVEYARD
Dawson
DAWSON

A - 2 Example of Information for Development Areas

Fort Selkirk-Pelly-White River Development Area (Map 7)

The highly rated post gold rush site at Fort Selkirk contains the largest concentration of historically significant structures on the river, outside Whitehorse and Dawson. It is designated on a priority development area in this concept plan and is already the site of government expenditures for conservation and recreation. The high significance of this section of the river, and existing pressures for development along the area's banks suggest a need for conservation measures downstream of Fort Selkirk as well as at the site itself.

Planned use level: high

Policy

The high value and significance of resources within this area provide a unique opportunity for the appreciation, interpretation and conservation of historical and natural resources. With respect to recreational use, however, improved access by boat and possibly by air, is required before the full potential of the Fort Selkirk site can be realized.

Concepts

Historical Conservation

- protect, stabilize, restore and reconstruct appropriate historic buildings
- adaptive reuse of restored buildings
- identify and interpret historical resources

Recreation

- meet demand for basic facilities for camping and picnicking

Natural Conservation

- recognition of natural resource values of the area from the confluence of the Pelly River to the White River in terms of wilderness character

Management

Short Term- provide central interpretive facility, tour guides, and ground signage
- provide bank stabilization and docking facilities for boats and aircraft
- trail clearing and maintenance

Long Term- archaeological investigation of H.B.C. fort site

B. List of Historic Themes and Sites

From "Theme and Resource Assessment Study"

Historical Background

Thematic Narratives

- A. Native History in the Early Contact Period 1840-1894
  - Native Economy
  - Native Settlement
  - Native Transportation
  - Native Social Organization

- B. The Early History of White Contact 1850-1896
  - Exploration
  - Trade
  - Church Missions
  - The Mining Frontier
  - Police Authority and Early Government
  - Transportation and Communication

- C. The Gold Rush 1894-1899
  - Routes to the Klondike
  - Settlements and Urbanization
  - Territorial Administration
  - Transportation and Communication

- D. Yukon: After the Gold Rush 1900...
  - Yukon Mining
  - Transportation and Cummunication
  - Energy
  - Cycles of the Yukon Economy
  - Government and the Capital

Site Narratives

- Moosehide
- Caribou Crossing (Carcross)
- Little Salmon

Appendix III - B Con't

Big Salmon
Coffee Creek
Fortymile
Fort Reliance
Ogilivie Island
Stewart City
Dawson City
Klondike Goldfields
Klondike City
Whitehorse
Fort Selkirk
Yukon Crossing
"Sternwheeler Graveyard" [illegible]on
Hootalinqua and Hootalinq[illegible]sland
Lower Laberge
Five Fingers Rapids

Summary of Site Priorization and Extant Resources

Moosehide
Caribou Crossing (Carcross)
Little Salmon
Big Salmon
Coffee Creek
Fortymile
Fort Reliance
Ogilivie Island
Stewart City
Dawson City
Klondike Goldfields
Klondike City
Bennett City
Tagish Post
Whitehorse
Fort Selkirk
Yukon Crossing
Sternwheeler Graveyard", Dawson
Hootalinqua and Hootalinqua Island
Lower Laberge
Five Fingers Rapids

C. Natural History Themes

SUMMARY AND RECOMMENDED ACTIONS FOR NATURAL HISTORY THEMES - YUKON RIVER CORRIDOR

PRIME SIGNIFICANT THEMES (CLASS I)	FEATURES	RECOMMENDED ACTIONS
BIG GAME MAMMALS (SHEEP, GOATS, CARIBOU, MULE DEER, MOOSE, WOLVES, BEAR)	. HISTORICAL POPULATIONS AND MOVEMENTS OF SHEEP, CARIBOU, GOATS, GRIZZLY BEARS . SHEEP MINERAL LICK IN DOZEN ISLANDS AREA (PART OF S. OGILVIE MTNS. I.B.P. PROPOSED ECOLOGICAL RESERVE) . CONCENTRATION OF BLACK BEARS IN EARLY SPRING ON GRASSLAND SLOPES, PARTICULARLY BETWEEN FORT SELKIRK AND DAWSON . MOOSE CALVING ON ISLANDS IN RIVER . A FEW SMALL AREAS WHERE LOWER SLOPES PROVIDE HABITAT FOR CARIBOU, SHEEP AND GOATS . MOOSE HABITAT IN LAKE AND RIVER MARSHLANDS AND RIVER FLOODPLAIN	. OBTAIN MORE INFORMATION ON POPULATION NUMBERS, DISTRIBUTION, AND CRITICAL HABITATS SPECIFIC TO YUKON RIVER . ENCOURAGE MANAGEMENT TO ENHANCE OPPORTUNITIES FOR VIEWING SPECIES ALONG THE YUKON RIVER CORRIDOR . PROVIDE VISITOR INTERPRETATION ON ANIMAL ECOLOGY AND BEST OPPORTUNITIES FOR VIEWING . EDUCATE TRAVELLERS ABOUT ATTRACTION OF BEARS TO CAMPSITE GARBAGE . MONITOR FUTURE DEVELOPMENT PROPOSALS WHICH COULD ADVERSELY AFFECT CRITICAL HABITATS AND RECOMMEND AVOIDANCE OF THESE AREAS
FURBEARERS (BEAVER, MUSKRAT, MINK, RIVER OTTER, MARTEN, WEASEL, WOLVERINE, RED SQUIRREL, LYNX, RED FOX)	. BEAVER HOUSES AND DAMS . ANIMAL TRAILS, SLIDES, VEGETATION MARKINGS . TRAPLINES . HISTORY OF TRAPPING . ANIMAL ECOLOGY	. OBTAIN INFORMATION ON POPULATIONS, DISTRIBUTIONS, CRITICAL HABITATS, LOCATION OF BEAVER HOUSES, ETC. ALONG YUKON RIVER CORRIDOR . ENCOURAGE MANAGEMENT TO ENHANCE OPPORTUNITIES FOR VIEWING . PROVIDE VISITOR INTERPRETATION ON POPULATION DYNAMICS, HABITATS, WILDLIFE MANAGEMENT, TRAPPING METHODS AND HISTORY, AND BEST OPPORTUNITIES FOR VIEWING
BIRDS OF PREY (PEREGRINE FALCON, EAGLES, OSPREYS, HAWKS, OWLS)	. HABITAT FOR THE ENDANGERED PEREGRINE FALCON, EAGLES AND OSPREYS, PARTICULARLY BETWEEN MINTO AND ALASKA-YUKON BOUNDARY . EXISTENCE OF OCCUPIED AND ABANDONED NESTS OF FALCONS AND EAGLES . ECOLOGY OF THE BIRDS OF PREY	. PROVIDE INTERPRETATION OF ENDANGERED STATUS OF FALCON AND OSPREY AND EDUCATION ABOUT THE SENSITIVITY OF OCCUPIED NESTS; INTERPRET ECOLOGY OF BIRDS OF PREY . KEEP LOCATION OF NESTS CONFIDENTIAL IN ORDER TO HELP AVOID DISTURBANCE BY RIVER TRAVELLERS . DO NOT DEVELOP RECREATION SITES NEAR NESTS; WORK IN COOPERATION WITH YUKON WILDLIFE SERVICE . RECOMMEND AVOIDANCE OF NESTING AREAS WHEN THEY ARE IN DANGER OF DISTURBANCE IN FUTURE DEVELOPMENT PROPOSALS
WATERFOWL (SWANS, GEESE, DUCKS, CRANES)	. MIGRATION OF SWANS AND GEESE, CRITICAL STOPOVERS IN WETLAND AREAS OF MARSH AND TAGISH LAKES . WINTERING DUCKS IN OPEN WATER AREAS AT LAKE OUTLETS IN LAKE LABERGE, MARSH LAKE . NESTING DUCKS AND GEESE ALONG YUKON RIVER . MIGRATION OF SANDHILL CRANE UP YUKON RIVER THENCE UP PELLY RIVER	. OBTAIN DATA ON THE LOCATIONS AND IMPORTANCE OF NESTING AREAS ALONG THE YUKON RIVER . ENCOURAGE MANAGEMENT SCHEMES TO MAINTAIN OR ENHANCE SPECIES POPULATIONS . MONITOR FUTURE DEVELOPMENTS FOR IMPACTS ON WATERFOWL MIGRATIONS AND HABITATS (E.G. ALASKA HIGHWAY PIPELINE CROSSING NORTH OF MARSH LAKE, RECREATION DEVELOPMENT OF UPPER YUKON RIVER LAKES SYSTEM, EXPANSION OF WHITEHORSE POWER DAM) . PROVIDE VISITOR INTERPRETATION ON MIGRATION, BEST OPPORTUNITES FOR VIEWING
PACIFIC SALMON (CHINOOK AND CHUM)	. UPSTREAM FALL MIGRATION - LONGEST DISTANCE TRAVELLED BY SALMON IN THE WORLD . CRITICAL SPAWNING AND OVERWINTERING GROUNDS . WHITEHORSE FISH LADDER . HISTORY AND IMPORTANCE OF COMMERCIAL AND SUBSISTENCE FISHING	. OBTAIN MORE INFORMATION ON POPULATION NUMBERS, TRENDS, LOCATION OF CRITICAL SPAWNING GROUNDS, SPECIES HABITS SPECIFIC TO THE YUKON RIVER AND NORTHERN CANADA . INVESTIGATE IMPLICATIONS OF INTERNATIONAL MANAGEMENT SCHEMES . PRESERVE SPAWNING GROUNDS AND OBSTRUCTION-FREE MIGRATION ROUTE . ENCOURAGE MANAGEMENT SCHEMES TO MAINTAIN OR INCREASE FISH POPULATION . PROVIDE VISITOR INTERPRETATION ABOUT

		MIGRATION, FISH ECOLOGY, OPERATION AND IMPACT OF WHITEHORSE FISH LADDER
WETLANDS (RIVER AND LAKE MARSHES)	• TAGISH LAKE AND RIVER • MARSH LAKE • UPPER LABERGE • LOWER LABERGE • YUKON RIVER SLOUGHS, PARTICULARLY BETWEEN CARMACKS AND FORT SELKIRK, AND WHITE RIVER TO DAWSON • EARLY SPRING AND WINTER "OPEN WATER PHENOMENA" WHICH PROVIDE UNIQUE WILDLIFE AND WATERFOWL HABITATS	• OBTAIN MORE INFORMATION ON THE IMPORTANCE OF THESE AREAS FOR WATERFOWL, WINTER HABITAT FOR MAMMALS, AND FISH SPAWNING AND WINTERING GROUNDS • MONITOR DEVELOPMENT PROPOSALS WHICH COULD HAVE ADVERSE IMPACTS ON THE QUALITY OF THE WETLANDS (E.G. PIPELINE, DAMS, MINES) • PROVIDE VISITOR INTERPRETATION ON MARSH PRODUCTIVITY AND BEST OPPORTUNITIES FOR WILDLIFE AND WATERFOWL VIEWING
GRASSLANDS	• SOUTH-FACING SLOPES ALONG YUKON RIVER, PARTICULARLY BETWEEN HOOTALINQUA AND CARMACKS, AND FORT SELKIRK TO DAWSON • MINTO	• OBTAIN INFORMATION ON LOCATION OF GRASSLAND SITES ALONG YUKON RIVER, THEIR IMPORTANCE AS HABITAT FOR MAMMALS AND BIRDS, AND THE SPECIES AND SIGNIFICANCE OF PLANTS FOUND ON THESE SITES • PROVIDE INTERPRETATION ON PLANT SPECIES, EDAPHIC AND CLIMATIC FACTORS, AND OPPORTUNITIES FOR VIEWING SPECIFIC BIRDS AND MAMMALS • INVESTIGATE THE AMOUNT AND SIGNIFICANCE OF HORSE GRAZING ON THESE GRASSLANDS IN TERMS OF COMPETITION WITH WILDLIFE • BECAUSE OF THE SENSITIVITY OF GRASSLAND SLOPES TO EROSION IF DISTURBED, MONITOR DEVELOPMENT PROPOSALS WHICH COULD CAUSE DESTRUCTION, AND RECOMMEND MITIGATIVE ACTIONS
GLACIAL HISTORY	• REMAINING GLACIERS AT HEADWATERS OF YUKON RIVER • EVIDENCE OF FRESH GLACIATION BETWEEN MARSH LAKE AND YUKON CROSSING • EVIDENCE OF OLDEST GLACIATION NEAR FORT SELKIRK • WEAKLY GLACIATED AREA BETWEEN YUKON CROSSING AND FORT SELKIRK SERVES AS A TRANSITION ZONE BETWEEN GLACIATED AND UNGLACIATED AREAS • INTERMINGLING OF GLACIAL AND VOLCANIC EVIDENCE AT MOUTH OF PELLY RIVER; MILES CANYON, AND VOLCANIC ASH DEPOSITS	• PROVIDE VISITOR INTERPRETATION ON THE UNIQUE OPPORTUNITY TO OBSERVE, WHILE TRAVELLING DOWN THE RIVER, GLACIAL EVIDENCE RANGING FROM MODERN GLACIERS, RECENT GLACIATION, OLD GLACIATION TO AN UNGLACIATED AREA; REVEAL THE SIGNIFICANCE OF THE UNGLACIATED AREA (ONE OF FEW IN CANADA) AND THE INTERMINGLING OF VOLCANIC AND GLACIAL EVIDENCE • MAINTAIN A DEGREE OF CONFIDENTIALITY CONCERNING SPECIFIC LOCATION OF REMAINS OF VOLCANIC AND GLACIAL MATERIALS BENEATH LAVA FLOWS TO AVOID EXCESSIVE COLLECTION AND DISTURBANCE BY RIVER TRAVELLERS
CANYONS	• MILES CANYON • THIRTY MILE SECTION	• PRESERVE AESTHETIC QUALITIES OF SITES • PROVIDE VISITOR INTERPRETATION OF CANYON FEATURES INCLUDING WATER PATTERNS AND CAUSE OF RIVER CONFINEMENT • EDUCATE RIVER USERS ABOUT RIVER DYNAMICS AND NAVIGATION
ROCK TOWERS AND PALISADES	• MILES CANYON BASALT WALLS • CONSOLIDATED ROCK TOWER ON ISLAND BELOW CAPE HORN IN THIRTY MILE SECTION • FIVE FINGER RAPIDS ISLANDS • HELL'S GATE SLOUGH ROCK PALISADE • FORT SELKIRK BASALT WALL • ROCK WALLS BETWEEN FIFTEEN-MILE AND FORTY-MILE RIVERS, PARTICULARLY AT HARRY AND CASSIAR CREEKS • OLD MAN AND OLD WOMAN ROCK TOWERS, FIFTEEN MILES BELOW FORTY-MILE RIVER	• PRESERVE AESTHETIC CHARACTER OF THESE FEATURES • PROVIDE VISITOR INTERPRETATION OF THE ROCK TYPES, THEIR RESISTANCE TO EROSION, AND OPPORTUNITIES FOR VIEWING FALCONS, EAGLES, CLIFF SPARROWS, SHEEP
SAND DUNES	• 'ACTIVE' PARABOLIC DUNES AND ASSOCIATED PLANT COMMUNITIES AT CARCROSS (IEP SITE) • STABILIZED DUNE AREA ON EAST LIMIT BETWEEN TAKHINI RIVER AND UPPER LABERGE • STABILIZED DUNES AREA ON EAST LIMIT BELOW INGERSOLL ISLANDS	• ESTABLISH AN "ECOLOGICAL RESERVE" TO PRESERVE SITE AT CARCROSS • OBTAIN MORE INFORMATION ON THE SIGNIFICANCE AND ACCESSIBILITY TO RIVER TRAVELLERS OF OTHER TWO DUNE AREAS • PROVIDE VISITOR INTERPRETATION ON THE

		DUNE PLANT COMMUNITIES, AEOLIAN PROCESSES, AND GLACIAL HISTORY
HYDROLOGY	. VARYING WATER VELOCITIES (RIVER PROFILE) . PEAK AND LOW FLOWS (HYDROGRAPHS) . YUKON RIVER DRAINS MORE THAN FIFTY PERCENT OF THE YUKON TERRITORY WHICH RANKS AS THE FIFTH LARGEST DRAINAGE IN NORTH AMERICA, FOURTH LONGEST RIVER IN NORTH AMERICA AND THE TENTH LONGEST RIVER IN THE WORLD . TWO DISTINCT MELTWATER REGIMES- GLACIER MELT PRODUCES HIGH FLOWS IN LATE SUMMER, EARLY FALL IN UPPER YUKON (ABOVE PELLY RIVER) AND SNOW MELT PRODUCES HIGH FLOWS IN SPRING IN LOWER YUKON RIVER . INCIDENCE OF FLOODING	. PROVIDE VISITOR INTERPRETATION ON NAVIGATION AND RELATIONSHIP BETWEEN HYDROLOGY AND CHANGES IN RIVER CHANNEL . FIELD-CHECK SPECIFIC SITES WHERE HYDROLOGY CAN BEST BE INTERPRETED . ARTICULATE RECREATIONAL VALUES OF YUKON RIVER AS A VIABLE ALTERNATIVE TO HYDRO-ELECTRIC POWER DEVELOPMENT
WATER QUALITY	. CLEAR, EMERALD-COLOURED WATER OF BENNETT LAKE AND LINDEMAN RIVER . CLEAR WATER OF THIRTY MILE SECTION . FUNCTION OF THE UPPER YUKON RIVER LAKES AS SETTLING PONDS FOR WATER-CARRIED SEDIMENTS . PROGRESSION OF INCREASINGLY NATURAL SILT-LADEN WATER OF YUKON RIVER WITH EACH ADDITIONAL TRIBUTARY . EXCEPTIONALLY HEAVILY SILT-LADEN WATER OF THE GLACIER-FED WHITE RIVER TRIBUTARY	. PROVIDE VISITOR INTERPRETATION ABOUT THE SOURCE OF SILT AND NATURAL DEBRIS AND ADVISE RIVER USERS ABOUT THE DEGREE OF POTABILITY OF WATER IN DIFFERENT SECTIONS OF THE YUKON RIVER CORRIDOR . ENCOURAGE WATER MANAGEMENT SCHEMES WHICH RESTRICT POLLUTION OF THE WATER QUALITY (E.G. TREATMENT OF MINING WASTES, SEWAGE TREATMENTS, SEWAGE DISPOSAL SYSTEMS, REGULATION OF OIL AND GAS SPILLAGE, EROSION CONTROLS DURING CONSTRUCTION OPERATIONS)

THEMES OF SOME SIGNIFICANCE (CLASS 2)	FEATURES	RECOMMENDED ACTIONS
HISTORY OF ROCKS	. LONG, COMPLEX GEOLOGICAL HISTORY OF THE YUKON PLATEAU . EXPOSURES OF ROCK FORMATIONS RANGING IN AGE THROUGH THE GREATER PART OF THE GEOLOGICAL SCALE . VARIETY OF ROCK TYPES . AESTHETIC QUALITIES OF ROCK OUTCROPS (COLORATION, MASSIVENESS, CANYON-LIKE CHARACTERISTICS, CONTRASTS WITH VEGETATION AND GLACIAL TILL) . GREATER ABUNDANCE AND WEATHERING OF ROCKS IN GLACIATED AREA COMPARED TO UNGLACIATED AREA . FOSSILS (NOT ABUNDANT): EAST LIMIT OF LAKE LABERGE, EAGLE'S NEST BLUFF, FIVE FINGER RAPIDS, EAST LIMIT BELOW PELLY RIVER, KLONDIKE RIVER VALLEY . VULCANISM: BASALT FLOWS AT MILES CANYON AND FORT SELKIRK, CINDER CONES OR VOLCANIC NECKS NORTHEAST AND SOUTHEAST OF MOUTH OF PELLY	. INVESTIGATE POSSIBILITIES FOR INTERPRETING GEOLOGICAL HISTORY (IDENTIFY EFFECTIVE INTERPRETIVE TECHNIQUES) . INVESTIGATE POTENTIAL FOR A SELF-GUIDING INTERPRETIVE HIKING TRAIL FROM MOUTH OF PELLY RIVER TO VOLCANO MOUNTAIN . MAINTAIN DEGREE OF CONFIDENTIALITY CONCERNING SPECIFIC LOCATIONS OF FOSSILS TO AVOID EXCESSIVE DISTURBANCE BY RIVER TRAVELLERS
ECONOMIC MINERALS	. IMPORTANCE OF MINERALS TO THE CULTURAL HERITAGE AND HUMAN HISTORY OF THE YUKON . ACTIVE AND ABANDONED MINES: MINERALS, MINING METHODS, OPPORTUNITIES FOR VIEWING BEDROCK STRATA IN DEEP PITS . PLACER GOLD: CREEK AND BENCH GRAVELS OF TRIBUTARY STREAM VALLEYS, ESPECIALLY BETWEEN SELWYN AND FORTY MILE RIVERS; SAND BARS ALONG YUKON RIVER, HOOTALINQUA TO STEWART RIVER . COAL:FIVE FINGER RAPIDS, TANTALUS BUTTE, COAL RIVER NORTH OF DAWSON . LEAD, ZINC, SILVER, GOLD:MONTANA MOUNTAIN . COPPER: WEST OF WHITEHORSE, PROPOSAL FOR NEW MINE NORTHWEST OF MINTO . ASBESTOS: CLINTON CREEK	. INVESTIGATE POSSIBILITIES FOR INTERPRETING ACTIVE AND ABANDONED MINES . INVESTIGATE FEASIBILITY OF PROVIDING OPPORTUNITIES FOR RIVER TRAVELLERS TO PAN FOR GOLD IN YUKON RIVER SAND BARS . ASSESS ENVIRONMENTAL IMPACT OF PROPOSED MINTO MINE AND RECOMMEND NECESSARY MITIGATIVE ACTIONS

PERMAFROST FEATURES	• STUDY AREA IS LOCATED IN DISCONTINUOUS PERMAFROST ZONE OF CANADA - BOUNDARY BETWEEN WIDESPREAD AND PATCHY PERMAFROST AREAS IS LOCATED APPROX. 20 MILES NORTH OF FORT SELKIRK • PERMAFROST LAYERS MAY OCCUR IN NORTH-FACING, BLACK SPRUCE-MOSS COVERED SLOPES IN PATCHY PERMAFROST AREA • ICE LAYERS MAY BE VISIBLE IN BANKS OF SMALL TRIBUTARY STREAMS IN WIDESPREAD PERMAFROST AREA - DEEP PERMAFROST OCCURS IN DAWSON AREA WHERE IT CREATED COMPLICATIONS FOR GOLD PLACER MINING • OPEN-SYSTEM PINGOS IN UNGLACIATED AREA-AT LEAST ONE PINGO OCCURS NEAR YUKON RIVER IN THE KLONDIKE RIVER VALLEY • PALSAS IN PEATLANDS AND SOLIFLUCTION LOBES (LOCATIONS WITHIN HIKING DISTANCE OF RIVER ARE UNKNOWN)	• FIELD-CHECK OCCURRENCE OF PERMAFROST, PINGOS, PALSAS AND SOLIFLUCTION WITHIN STUDY CORRIDOR • INVESTIGATE POSSIBILITIES FOR INTERPRETATION OF THEME • CONSIDER SENSITIVITY OF PERMAFROST AREAS IN DEVELOPMENTS WITHIN STUDY CORRIDOR
RIVER PATTERNS (OCCURRENCE OF MEANDERS, ISLANDS, BARS, SLOUGHS, ETC.)	• CUT-OFF MEANDER ABOVE L. LABERGE • THIRTY MILE SECTION: EXCEPTIONALLY STABLE MEANDER CHANNEL; POOL AND RIFFLE PATTERN • CLASSIC MEANDER REACHES IN THIRTY MILE SECTION AND BETWEEN HOOTALINQUA AND LITTLE SALMON • DEFORMED MEANDERS BETWEEN LITTLE SALMON AND CARMACKS, SOME NEARLY CUT-OFF • ABUNDANCE OF ISLANDS AND SLOUGHS BETWEEN LITTLE SALMON AND CARMACKS, RINK RAPIDS TO FORT SELKIRK, WHITE RIVER TO DAWSON • ABUNDANCE OF SANDBARS AND ISLANDS AT MOUTH OF WHITE AND STEWART RIVERS • CLASSIC BRAIDED PATTERN OF WHITE RIVER	• INVESTIGATE POSSIBILITIES FOR INTERPRETING THE THEME • ADVISE TRAVELLERS ABOUT NAVIGATING DENSE SLOUGH AND ISLANDS AREAS
WILDFLOWERS	• MORE THAN ONE HUNDRED AND TWENTY ATTRACTIVE SPECIES OF WILDFLOWERS, INCLUDING EDIBLE BERRIES AND HERBS, HAVE BEEN IDENTIFIED WITHIN THE YUKON RIVER CORRIDOR, ESPECIALLY IN ASSOCIATION WITH RIPARIAN VEGETATION, PIONEER COMMUNITIES AND GRASSLANDS	• PROVIDE A SPECIES IDENTIFICATION LIST AND SEASONAL OCCURRENCE (SPRING, SUMMER, FALL) FOR USE BY RIVER TRAVELLERS
RIPARIAN VEGETATION	• CONSISTS OF PLANT ASSOCIATIONS ON VALLEY BOTTOM SOILS ON ISLANDS AND LAND ADJACENT TO THE RIVER THROUGHOUT THE CORRIDOR - SPECIES ARE HORSETAIL, AQUATIC SEDGES, RUSHES, GRASSES, TALL SHRUBS (WILLOW AND ALDER) OVERTOPPED BY ASPEN, POPLAR, AND WHITE SPRUCE • COMPRISE THE MOST PRODUCTIVE TREES (TALLER AND WIDER DIAMETERS) IN NORTHERN LATITUDES • PROVIDES THE MOST PRODUCTIVE HABITAT FOR WILDLIFE IN NORTHERN LATITUDES • PROVIDES CRITICALLY IMPORTANT NUTRITION FOR NORTHERN LATITUDE UNGULATES	• PROVIDE VISITOR INTERPRETATION • ENCOURAGE MANAGEMENT OF THE YUKON RIVER CORRIDOR TO RETAIN CRITICAL WILDLIFE RIPARIAN HABITATS
PURE LODGEPOLE PINE COMMUNITIES	• RELATIVELY OPEN CANOPY WITH LIMITED SHRUB LAYER DOMINATED BY LODGEPOLE PINE TO THE NEAR EXCLUSION OF ALL OTHER TREES • FOUND ON DRY, SANDY OR GRAVELLY SITES INCLUDING SOUTH AND NORTH ENDS OF BENNETT LAKE AND BETWEEN WHITEHORSE AND LAKE LABERGE (OTHER SITES WITHIN CORRIDOR ARE UNKNOWN) • LODGEPOLE PINE USUALLY UNABLE TO MAINTAIN ITSELF IN THE ABSENCE OF FIRE BUT APPEARS TO BE ABLE TO REPRODUCE ITSELF ON THESE DRY SITES • SPECIES OF SPECIAL SCIENTIFIC INTEREST BECAUSE OF LINK WITH REFUGIA DURING THE ICE AGE • WALKING WITHIN PINE STANDS IS EASY, THEREFORE SITES ARE RECREATIONALLY ATTRACTIVE	• FIELD-CHECK FOR OCCURRENCE OF THIS THEME WITHIN STUDY CORRIDOR • ASSESS RECREATIONAL POTENTIAL • INVESTIGATE POSSIBILITIES FOR VISITOR INTERPRETATION

MATURE SPRUCE FORESTS	• IN THE ABSENCE OF FIRE, SPRUCE EVENTUALLY DOMINATES A COMMUNITY • WHITE SPRUCE-DOMINATED COMMUNITIES ARE USUALLY IN ASSOCIATION WITH BLACK SPRUCE AND LODGEPOLE PINE WITH A DIVERSE SHRUB LAYER • BLACK SPRUCE-DOMINATED COMMUNITIES COMMONLY OCCUR ON NORTH-FACING SLOPES IN ASSOCIATION WITH SPHAGNUM MOSS AND LABRADOR TEA, AS WELL AS SOME PINE	• FIELD-CHECK FOR OCCURRENCE OF THIS THEME WITHIN STUDY CORRIDOR • INVESTIGATE POSSIBILITIES FOR INTERPRETATION OF SPECIES, SITE CONDITIONS, FIRE HISTORY AND SUCCESSIONAL STAGE
EFFECTS OF FIRE	• FIRE HAS BOTH POSITIVE AND NEGATIVE EFFECTS ON AESTHETIC AND RECREATIONAL VALUES • PLANT COMMUNITIES WHICH MAKE UP THE BOREAL FOREST ARE NATURALLY ADAPTED TO AND REJUVENATED BY FIRE - PRESENCE AND ABUNDANCE OF ASPEN AND LODGEPOLE PINE ARE DEPENDENT ON FIRE • SOME WILDLIFE SPECIES SUCH AS MOOSE AND SNOWSHOE HARE DEPEND UPON THE SUCCESSIONAL PLANT COMMUNITIES RESULTING FROM FIRE, WHEREAS FIRE CAN HAVE DELETERIOUS EFFECTS ON CARIBOU WINTER RANGE • EXTENT OF WILDFIRE VARIES WITH CLIMATE, SITE MOISTURE CONDITIONS AND AMOUNT OF CONSUMABLE BIOMASS • FIRE CAUSED BY MAN OR LIGHTNING HAS BEEN WIDESPREAD ALONG THE YUKON RIVER CORRIDOR • MOST FIRES ARE SMALL BUT THE FEW LARGE FIRES CONTRIBUTE MOST TO TOTAL AREA BURNED - PRIORITY FIRE CONTROL AREAS ARE NEAR COMMUNITIES AND RECREATION AREAS • MOST FIRES OCCUR DURING JUNE-AUGUST WHEN FIRE-CONDUCIVE WEATHER CONDITIONS AND RECREATIONAL ACTIVITY ARE MAXIMIZED	• INCLUDE ADEQUATE AND EFFECTIVE FIRE CONTINGENCY PLANS IN MANAGEMENT PROPOSALS FOR THE YUKON RIVER CORRIDOR • EDUCATE RIVER TRAVELLERS ABOUT THE ECOLOGICAL EFFECTS OF FIRE IN THE BOREAL FOREST AS WELLS AS THE DELETERIOUS EFFECTS OF FIRE IN RECREATIONAL AREAS
SHOREBIRDS, GULLS, TERNS, LOONS, GREBES AND KINGFISHER	• INCLUDES MANY SPECIES AND A WIDE VARIETY OF BIRD SOUNDS • NESTS ARE FOUND WITHIN RIVER HABITAT (SLOUGHS, ISLANDS, MARSHES, FLOODPLAIN AND SHORES) • HERRING GULL NESTS ARE KNOWN TO OCCUR ON A SMALL ROCKY ISLAND IN NARES LAKE NEAR THE MOUTH OF WINDY ARM	• PROVIDE SPECIES IDENTIFICATION LIST FOR USE BY RIVER TRAVELLERS • OBTAIN MORE INFORMATION ON CRITICAL HABITATS WITHIN STUDY CORRIDOR • PROVIDE VISITOR INTERPRETATION OF SPECIES HABITATS AND LIFE HISTORY. EMPHASIZE NESTING SEASON AND SENSITIVITIES
GROUSE AND PTARMIGAN	• INCLUDES SEVEN YUKON TERRITORY SPECIES • FOWL-LIKE, SCRATCHING GROUND BIRDS WHICH ARE HUNTED FOR GAME • SPRUCE AND RUFFED GROUSE MOST LIKELY TO BE SEEN BY RIVER TRAVELLERS - DRUMMING SOUND OF RUFFED GROUSE CAN BE HEARD IN SPRING WOODLANDS • PTARMIGAN LIKELY TO DESCEND TO RIVER MARGIN ONLY IN WINTER • SHARP-TAILED GROUSE GATHER IN SPRING ON ANCESTRAL DANCING GROUNDS - MINTO GRASSLANDS POSSIBLY SUCH HABITAT	• PROVIDE VISITOR INTERPRETATION OF SPECIES FOUND WITHIN CORRIDOR • IDENTIFY WHETHER SHARP-TAILED GROUSE DANCING GROUNDS OCCUR WITHIN CORRIDOR - THESE ARE CRITICAL HABITATS FOR THE SPECIES AND SHOULD BE PRESERVED • ENCOURAGE GAME MANAGEMENT TO ENHANCE THE SPECIES WITHIN THE CORRIDOR
WOODPECKERS AND PASSERINES	• INCLUDES MANY SPECIES AND A WIDE VARIETY OF BIRD SOUNDS • WOODPECKERS ARE WOODLAND BIRDS WHICH FEED ON WOOD-BORING INSECTS • PASSERINES ARE WOODLAND BIRDS WHICH HAVE WELL-DEVELOPED TOES FOR PERCHING AND MOST HAVE WELL-DEVELOPED SONGS	• PROVIDE SPECIES IDENTIFICATION LIST FOR USE BY RIVER TRAVELLERS
LAKE TROUT, ARCTIC GRAYLING, NORTHERN PIKE AND WHITEFISHES	• PRIME SPORT FISHING SPECIES WITHIN THE STUDY CORRIDOR • LAKE TROUT AND NORTHERN PIKE MOST COMMON IN SOUTHERN LAKE SYSTEM OF THE CORRIDOR • ARCTIC GRAYLING IS RESTRICTED TO NORTHERN WATERS IN NORTH AMERICA AND IS WIDELY DISTRIBUTED IN YUKON RIVER SYSTEM • WHITEFISHES ARE IMPORTANT FOR SUBSISTENCE FISHING AND ARE GROWING IN IMPORTANCE FOR SPORT FISHING	• OBTAIN MORE INFORMATION ABOUT POPULATION NUMBERS, CRITICAL FEEDING AND SPAWNING AREAS, SURVIVAL VALUES AND LIFE HISTORY OF SPECIES • MONITOR FUTURE DEVELOPMENT PROPOSALS WHICH COULD ADVERSELY AFFECT HABITATS AND RECOMMEND ADEQUATE CONSIDERATION FOR THESE SPECIES • ENCOURAGE MANAGEMENT SCHEMES TO MAINTAIN OR ENHANCE FISH POPULATIONS

THEMES OF LEAST SIGNIFICANCE (CLASS 3)	FEATURES	RECOMMENDED ACTIONS
MOUNTAINS	• AESTHETIC VALUE OF COASTAL MOUNTAINS, DAWSON RANGE AND OLGILVIES AND OTHER INDIVIDUAL MOUNTAINS AND HILLS IN THE YUKON RIVER LANDSCAPE • OPPORTUNITIES TO HIKE UP HILLS TO VIEW TOPOGRAPHY OF THE YUKON PLATEAU	• MONITOR FUTURE PROPOSALS FOR DEVELOPMENTS ON MOUNTAIN-AND HILLSIDES TO DETERMINE ADVERSE IMPACTS ON SCENIC QUALITIES • ENCOURAGE RIVER TRAVELLERS TO ASCEND HILLS FOR TOPOGRAPHICAL APPRECIATION OF THE YUKON PLATEAU, ESPECIALLY TO COMPARE GLACIATED AND UNGLACIATED AREAS
VALLEYS	• TINTINA TRENCH • VARYING WIDTHS OF YUKON RIVER VALLEY • CHARACTER OF VALLEYS IN YUKON PLATEAU AS VIEWED FROM HILLS BORDERING THE RIVER • "UNNATURAL" COURSE OF THE YUKON RIVER THROUGH THE DAWSON RANGE BETWEEN SELWYN AND WHITE RIVERS, CAUSED BY DIFFERENTIAL UPLIFT AND ADVANCE OF PLEISTOCENE ICE • TRUNCATED SPURS ALONG YUKON RIVER BETWEEN SELWYN AND WHITE RIVER	• FIELD-CHECK PORTION OF YUKON RIVER WHICH FLOWS IN TINTINA TRENCH TO DETERMINE WHETHER INTERPRETATION OF THIS MAJOR YUKON TERRITORY VALLEY FEATURE COULD BE EFFECTIVE • INVESTIGATE POSSIBILITIES FOR INTERPRETING CHARACTERISTICS OF THE YUKON RIVER VALLEY
TERRACES	• TOPOGRAPHIC "STEPS" OR "PLATFORMS" IN THE RIVER VALLEY THAT REPRESENT FORMER LEVELS OF THE VALLEY FLOOR OR FLOODPLAIN, OR GLACIAL LANDFORMS • VARIETY OF TYPES IN YUKON RIVER VALLEY INCLUDE ROCK, KAME, ALLUVIAL, AND RIVER TERRACES	• INVESTIGATE INTERPRETIVE POTENTIAL OF THEME • MONITOR FUTURE PROPOSALS FOR DEVELOPMENTS ON TERRACES TO DETERMINE ADVERSE IMPACTS ON RIVER AESTHETICS
LANDSLIDES AND MUDSLIDES (MASS WASTING PROCESSES)	• EVIDENCE OF LANDSLIDES ON SOUTH LIMIT OF YUKON RIVER NEAR DOZEN ISLANDS AREA, MIDNIGHT DOME AT DAWSON, AND TATCHUN CREEK-FIVE FINGER RAPIDS AREA • MUDSLIDES FOUND ESPECIALLY BETWEEN LOWER LABERGE AND BIG SALMON	• INVESTIGATE INTERPRETIVE POTENTIAL OF THEME • OBTAIN MORE INFORMATION CONCERNING THE OCCURRENCE OF LANDSLIDES, MUDSLIDES, TALUS SLOPES AND ALLUVIAL FANS ALONG THE YUKON RIVER
SOILS	• GENERALLY WEAK SOIL PROFILE BECAUSE OF YOUTHFULNESS OF SURFACE MATERIALS, AND COLD, DRY CLIMATE • MOST PRODUCTIVE SOILS IN NORTHERN CANADA ARE FOUND IN RIVER VALLEY BOTTOMS, RESULTING FROM SILT DEPOSITION • RESTRICTIONS ON AGRICULTURE BECAUSE OF WEAK SOILS AND SHORT GROWING SEASON • DIFFERENCES BETWEEN SOIL PARENT MATERIALS IN GLACIATED AND UNGLACIATED AREAS • CONSPICUOUS LAYER OF VOLCANIC ASH SEEN IN RIVER BANKS IN CONTACT WITH TOPSOIL AND VEGETATION ROOTS	• INVESTIGATE POTENTIAL FOR INTERPRETING SOILS IN RELATION TO AGRICULTURAL HISTORY AND POTENTIAL IN THE YUKON VALLEY • PROVIDE VISITOR INTERPRETATION OF VOLCANIC ASH DEPOSITS
BANK EROSION	• SLUMPING RIVER BANKS AND TREES FALLING INTO RIVER • FACTORS CONTRIBUTING TO RIVER BANK EROSION INCLUDE STAGE AND VELOCITY OF THE RIVER; SPEED, DIRECTION AND PERSISTENCE OF WIND; MATERIAL IN BANK AND THE EFFECTIVENESS OF VEGETATION IN BINDING IT;LOCATION AND HEIGHT OF BANK; TEMPERATURE OF AIR AND WATER; DEGREE OF EXPOSURE TO SUN • RIVER BANK HAS ABILITY TO RETREAT A GREAT DISTANCE ACCORDING TO MRS. BURIEN WHO LIVES AT STEWART RIVER. SHE TELLS OF HAVING BEEN BORN "IN THE MIDDLE OF THE RIVER" • THE MATERIAL WHICH ERODES FROM THE BANKS IS DEPOSITED ELSEWHERE ALONG THE RIVER AT ISLANDS, BARS OR INSIDE MEANDERS	• ADVISE RIVER TRAVELLERS ABOUT NAVIGATIONAL HAZARDS OF "SWEEPERS" AND DEBRIS FALLING INTO RIVER • CONSIDER BANK EROSION IN DEVELOPMENT OF RECREATION FACILITIES

PIONEER COMMUNITIES	. COMMUNITIES OF GRASSES, HERBS AND SHRUBS MAKE UP THE INITIAL PLANT COVER ON RECENTLY BURNED, CLEARED, OR OTHERWISE DISTURBED AREAS . GENERALLY SENSITIVE TO DISTURBANCE SOON AFTER INITIAL ESTABLISHMENT, SLOW TO RECOVER FROM THIS SECONDARY DISTURBANCE, THEREFORE MORE SUSCEPTIBLE TO EROSION	. PROVIDE VISITOR INTERPRETATION OF ORIGIN, PLANT SPECIES AND SUCCESSIONAL STAGE . CONSIDER POTENTIAL SENSITIVITY OF PIONEER COMMUNITIES IN DEVELOPMENT OF RECREATION FACILITIES
MIXED WOODS	. COMMUNITIES WITH DECIDUOUS TREES (USUALLY ASPEN, SOMETIMES BIRCH AND POPLAR) AS A PROMINENT COMPONENT WITH CONIFEROUS TREES (USUALLY WHITE SPRUCE, SOMETIMES LODGEPOLE PINE) . COMMUNITIES GENERALLY GROW ON WARMER EXPOSURES AND SLOPES ALONG STUDY CORRIDOR . PRESENCE AND ABUNDANCE OF ASPEN, AS IN CASE OF LODGEPOLE PINE, INFLUENCED BY FIRE	. FIELD-CHECK FOR OCCURRENCE OF THEME IN CORRIDOR . PROVIDE A SPECIES IDENTIFICATION LIST FOR USE BY RIVER TRAVELLERS . INVESTIGATE POSSIBILITIES FOR VISITOR INTERPRETATION OF SPECIES, SITE CONDITIONS, FIRE HISTORY AND SUCCESSIONAL STAGE
SMALL MAMMALS	. SHREWS, BAT, HARE , CHIPMUNK, WOODCHUCK, SQUIRRELS, MICE, LEMMING, VOLES, PORCUPINE . INTEGRAL PART OF THE ECOLOGY OF LARGER MAMMALS AND BIRDS OF PREY	. PROVIDE SPECIES IDENTIFICATION LIST FOR USE BY RIVER TRAVELLERS . INVESTIGATE POSSIBILITIES FOR VISITOR INTERPRETATION OF THE ECOLOGY OF SMALL MAMMALS
CHUB, BURBOT, INCONNU, SUCKERS, SCULPIN	. INCLUDES FORAGING FISHES, PREDATORS AND FISHES WHICH THEMSELVES SERVE AS FOOD FOR OTHER FISHES	. OBTAIN MORE INFORMATION ON LIFE HISTORY OF THESE SPECIES TO DETERMINE THEIR ECOLOGICAL IMPORTANCE
HERPTILES	. WOOD FROG IS THE ONLY COMMON AMPHIBIAN . BOREAL TOAD AND WESTERN SPOTTED FROG AT NORTHERN LIMIT IN SOUTHERN YUKON . ABSENCE OF SNAKES	
INSECTS	. MOSQUITOES AND BLACK FLIES ABUNDANT ALONG YUKON RIVER	. ADVISE TRAVELLERS ABOUT BEING PREPARED FOR INSECTS AND WHERE THE BEST PLACES ARE TO CAMP TO AVOID INSECTS AS MUCH AS POSSIBLE

APPENDIX IV

Historic Sites Inventory and Evalution

Historic Sites Inventory and Evaluation

The following list provides a very brief summary of information and significance of some historic sites in the Basin. Information on Yukon sites was supplied by Government of Yukon, Department of Tourism, Recreation and Culture, and information on B.C. sites was supplied by Province of B.C. Heritage Conservation Branch of the Ministry of Provincial Secretary and Government Services. More detailed information on these and other sites is available from these agencies. In addition, other government and private agencies and groups may have collected information on heritage resources which have not been mapped or described in this study. These agencies include but are not limited to the Council for Yukon Indians, Yukon Historical and Museums Association, and the Atlin Historical Society.

A Summary

1. Windy Arm/Montana Mountain
   - contains the remains of several mining operations and settlements. Unrecorded; unassessed.

2. Carcross (THS*)
   - main features include S.S. Tutchi, Caribou Hotel, Watson's Store and cemetery. The downtown core and both waterfronts are significant landscapes. Generally, moderate to good condition, moderate to high significance.

   - the S.S. Tutshi is being stabilized and a phase interpretive plan is being developed. The site will be owned by Y.T.G.

* THS: Territorial Historic Site

3. Tagish
   - Y.T.G. Campground

   - NWMP Post was once divisional H.Q. Unrecorded; moderate significance.

   - Land Claims

4. Robinson
   - roadhouse and stopping point on WP & YR railway.

   - preliminary stabilization work planned for 1984/85.

5. Cowley
   - stopping point on WP & YR railway. Moderate condition; unassessed significance.

6. Whitehorse (THS)
   - Miles Canyon townsite and tramways on both sides of river were important to the development of the city. Poor condition; high significance.

   - various features but not in a cohesive landscape. Major features have been obliterated. Generally, poor condition; low to moderate significance.

   - development recommended in Tourism Development Plan.

7. Mendenhall
   - stopping house and small settlement. Unrecorded; unassessed.

8. Takhini Crossing
   - stopping house and ferry crossing. Unrecorded; unassessed.

9. Kloo Lake

- trading post. Unrecorded; unassessed.

10. Upper Laberge

- NWMP Post and Indian village. Unrecorded; moderate significance.

11. Silver City

- mining town. Moderate to good condition; moderate significance.

- the site is privately owned but proposed for future development by YTG, in Kluane Tourism Development Plan.

12. Hutshi

- pre-contact Indian village, trading post, and Dalton Trail stopping point. Poor condition; unassessed significance.

13. Livingstone Creek

- gold mining town, still active. NWMP Post. Various features. Generally moderate to good condition; moderate to high significance.

14. Lower Laberge

- sternwheeler servicing stop, roadhouse, telegraph station, and NWMP Post.

- Water access only - road potential.

- generally, moderate condition; moderate significance.

- this site is presently being stabilized by YTG.

15. Boyer's (unconfirmed) Camp - 17 Mile Wood Camp

- sternwheeler woodcutting camp. Poor to moderate condition: low to moderate significance.

16. Hootalinqua

- no road access.

- sternwheeler service and repair site. Roadhouse, shipyard, S.S. Evelyn sternwheeler.

- camping.

- moderte condition; moderate significance.

- this site is being stabilized by YTG.

17. Canyon City (White River)

- mining town and jumping off point for Chisana Gold Fields. Unrecorded; low significance.

18. Big Eddy

- fish camp. Moderate condition; unassessed significance.

19. Montague House

- stopping house on Dawson-Whitehorse road. Moderate condition; moderate to high significance.

20. Pelly Banks

- two trading posts. Poor condition; high significance.

21. Big Salmon NWMP Post

- NWMP Post and telegraph station. Moderate to good condition; moderate significance.

- this site will be stabilized within the next few years, by YTG.

22. Big Salmon

- land claims; water access.

- Indian village and trade site. Moderate to good condition; moderate significance.

23. Cyr's Dredge

- small dredge used on nearby creeks and bars. Moderate to good condition; unassessed significance.

24. Boyer's (Erikson's) Camp

- sternwheeler woodcutting camp. Poor to moderate condition; low significance.

25. Twin Creeks

- fish camp. Poor to moderate condition; unassessed significance.

26. Old Ross

- historic townsite. Unrecorded; unassessed.

27. Little Salmon

- land claims; road access.

- Indian village, mission, store. Moderate condition; moderate significance.

28. Carmacks

- campground, boat dock, airstrip.

- various features. Unrecorded; unassessed.

29. Tantalus Butte

- mining site. Unrecorded; unassessed.

Five Fingers Coal Mine (unmapped)

- mining site. Moderate condition. Unassessed.

Kellyville (unmapped)

- historic townsite. Unrecorded; unassessed.

30. Yukon Crossing

- no road.

- early road and river stop and service site. Roadhouse and stable.

- moderate condition, moderate significance.

- stabilization of this site by YTG will commence within two years.

31. Snag

- townsite. Unrecorded; unassessed.

32a. William's Creek/Merrice Creek

- mining camp. Moderate condition; unassessed significance.

32. Hoochekoo Creek

- NWMP Post, mining camp. Unrecorded; unassessed.

33. Minto

- Indian village and sternwheeler stop. Unrecorded; minor to moderate significance.

34. Wolverine Creek

- early trade site. Unrecorded; unassessed.

35. Fort Selkirk

- land claims; native own E1/2; some private ownership; YTG owns roads and 2 lots.

- various features. Largely an early trade and service center. Generally, moderately to good condition; high significance.

36. Pelly Farm

- early farming and ranching site, still in operation. Moderate to good condition; high significance.

37. Selwyn

- mining community and post office. Poor to moderate condition; unassessed significance.

38. Isaac Creek

- mining community. Poor condition; unassessed significance.

39. Britannia Creek

- mining community. Poor condition; unassessed significance.

40. Ballarat Creek

- mining community. Poor condition; unassessed significance.

41. Coffee Creek

- mining community and starting point of the Chisana Trail. Poor condition; unassessed significance.

Halfway NWMP Post (unmapped)

- moderate condition; unassessed.

Dan Man Creek, Wood Camp (unmapped

- moderate condition; unassessed.

42. Kirkman Creek

- mining community. Moderate condition, unassessed.

Carlisle Creek (unmapped)

- mining community. Moderate condition, unassessed.

43. Thistle Creek

- mining community. Unrecorded; unassessed.

44. Scroggie Creek

- mining community. Unrecorded; unassessed.

45. Mazie May Ranch

- early ranch. Unrecorded; unassessed.

46. Stewart River

- sternwheeler and general service and supply site. Moderate to good condition; moderate significance.

47. Fraser Falls

- portage site with tramway. Unrecorded; unassessed.

48. Ogilvie

- farming and earliest post office. Poor condition, moderate significance.

49. McQuesten

- townsite, unrecorded; unassessed.

50. Mayo

- mining community with various features. Generally, moderate to good condition; moderate to high significance.

51. Gordon Landing

- mining community. Unrecorded; unassessed.

52. Dominion

- mining community. Unrecorded; unassessed.

53. Granville

- mining community. Unrecorded; unassessed.

54. Sulphur

- mining community. Unrecorded; unassessed.

55. Lansing

- mining community. Unrecorded; unassessed.

56. Keno Hill

- first hard rock mining operation in Yukon. Moderate to good condition; high significance.

57. Grand Forks

- mining community. Unrecorded; unassessed.

58. Gold Bottom

- mining community. Unrecorded; unassessed.

59. Bear Creek

- YCG Co. town, largely owned and used by Parks Canada. Good condition; moderate to high significance.

60. Rock Creek

- mining community. Unrecorded; unassessed.

61. Klondike City

- "social ghetto" of Dawson City, an important mining and industrial site. Poor condition; high significance.

62. Dawson City

- various sites, the majority of which are in private or Parks Canada hands. Three sites (Yukon Saw Mill, Millen House, Old Territorial Administration Building) are in YTG control. All are in good condition; high significance.

- YTG - ongoing work (Dawson Tourism Development Plan).

63. West Creek

- farming community and shipyard. Poor condition; unassessed significance.

64. Moosehide (THS)

- YTG supplied logs to natives doing development.

- Indian village, Anglican Church and cemetery. Moderate to good condition; moderate to high significance. The site also contains as yet unassessed pre-historic remains. (See hydro reports.)

65. Fort Reliance

- Jack McQuesten Trading Post. Poor condition; moderate to high significance.

Perry DeWolfe's Fish Camp (unmapped)

- moderate condition, unassessed.

66. Forty Mile

- YTG - one lot owned.

- work planned by YTG.

- various sites composing Yukon's first major mining community. Poor to moderate condition; high significance.

67. Fort Constantine

- Yukon's first NWMP Post. Poor condition; high significance.

68. Fort Cudahy

- Northern Commercial Company's first Yukon post. Poor condition; moderate to high significance.

69. Coal Creek

- coal mining and railway site. Unrecorded; unassessed.

OTHER FEATURES

Dalton Trail

- the major overland route to the Klondike. Moderate conditions; high significance.

Dawson-Whitehorse Road

- major winter route between the two centers. Moderate condition; moderate to high significance.

Chisana Trail

- ran from Coffee Creek to the Chisana Gold Fields of Alaska. Unrecorded; unassessed.

James Trail

- the overland connection between the White River and Chisana Gold Fields. Unrecorded; unassessed.

Canol Road

- constructed for the building and support of the ill-fated wartime Canada Oil Project. Moderate to good condition; moderate to high significance.

Dempster Highway

- one of the world's most northerly highways. Good condition; high significance.

Alaska Highway

- Yukon's major land link with the south and representing a work of military necessity. Good condition; high significance.

70. Bennett City - B.C.

- high significance; no road access; rail/boat only.

- WP & YR - private owned.

- end of Chilkoot Trail; archaeological potential.

- very fragile.

71. Taku Tram - B.C.

- tramline conneted Tagish Lake and Atlin Lake.

- operated from about 1900 - 1940.

72. Atlin - B.C.

- site of a "mini gold rush" which lasted from 1898 - 1908.

- several historic buildings and features including the steamer "Tarahne".

- nearby "Discovery" townsite once housed a tent City of 10,000.

- tourism development plan for the area emphasizes gold rush theme.

73. Yukon Telegraph Trail

- was built from Hazelton, B.C. to Dawson between 1898 and 1901, and was used until displaced by wireless radio in 1930's.

- portions of the trail are still used by wilderness travellers.

74. Chilkoot Trail

- runs from Skagway to Bennett Lake.

- historical significance associated with the Gold Rush of 1897-1998 and before that was used by traders, trappers and natives as a route inland from the coast.

- is a component of the proposed Klondike Gold Rush International Historic Trail.

- is currently under B.C. and Yukon jurisdiction, but is in the process of being transferred to Parks Canada and designated as a National Historic Trail.

- currently actively used by tourist and resident recreationists.

APPENDIX V

Summary of Craft Related, Water Based Recreational Activities in the Basin

From: Inventory, Analysis and Evaluation
of the Recreational Capability of
the Yukon River Basin.

Reid Crowther and Partners Ltd.
1983

Recreational Canoeing

The recreational canoe averages 4.9 to 5.2 metres in length (16-17 feet) and 80 to 90 centimetres in beam (32-36 inches) and is not usually powered or sailed. It usually carries two people and up to 40 kilograms (88 pounds) of other gear before becoming unseaworthy and difficult to manoeuver. Recreational canoes are paddled at approximately 4 kph on calm water, and can cope with a great variety of water conditions. Canoeists prefer to paddle in pleasant waters, so that lakes such as Bennett with its squall winds and great distances between sheltered shores are seldom travelled by recreational canoes. The recreational canoeist is discussed under the following subheadings:

- resident day use
- resident multi-day use
- non-resident day use
- non-resident multi-day use

Resident Day Use

A 1977 sampling of Yukon residents showed that approximately 27% of the population canoed (Burton, 1977). Increased sales of recreational canoes, and increased participation in canoe lessons indicate a very rapid growth in the activity. Canoe lessons in 1974 drew 10 local residents and in 1983 drew approximately 250 people (H. McKenzie, pers. comm.). Canoe sales have surpassed those of power boats at local outlets and are now selling at a ratio of four canoes to every three powerboats (Greg Campion, pers. comm.).

Day use is any canoeing activity that does not require overnighting en route, and may be as brief as a half hour. In this setting the recreational canoe can be used for a whole range of activities: relaxation, fishing, swimming, practising skills, wildlife viewing or exercise. This type of use tends to happen close to communities on lakes and particularly during evenings and weekends. This user group requires easy access to waterbodies, and in the case of lakes, calm water, with little or no wind. Smaller, more intimate waterbodies are the most popular, and many of these lakes are discussed in this study. Most are located close to Yukon communities or adjacent to cottaging areas or public campgrounds along major highways: examples are Chadburn Lake, Scout Lake and Twin Lakes.

Resident Multi-Day Use

Multi-day use generally involves journeying and is often referred to as "tripping". In this context the recreational canoe is used to travel across or down waterways, with other uses such as fishing subservient to these aims. Lakes in themselves do not offer much to the multi-day canoeist as larger lakes pose navigational hazards because of squall winds, and smaller lakes are crossed too quickly. Lakes are utlized when they are part of a system of lakes and rivers, or when they provide access to a river. Examples of this are the Snafu Lake system, Lake Laberge and the Sheldon/Field/Lewis lake system.

Rivers heavily utilized by recreational canoeists have some distinguishing characteristics. They have good access and egress, are easy to navigate and have a water speed over 3 kph. The quality of the wilderness experience is of great concern to this group as evidenced by a presentation on behalf of the Yukon Voyageurs Canoe Club to the Placer Mining Guidelines Public Review Committee. The presentation gives a good insight into the perceptions of this user group:

> "The Yukon attracts and holds many of its residents because of its unique wilderness environment. It is a territory of rivers and lakes which have not felt alteration by man's work, as have so much of the rest of the world. Consequently the Club is concerned about the quality of the wilderness experience. The central theme of this submission is the preservation of the uniqueness of our Yukon rivers.

The Club has developed a Provisional list of rivers in the Territory broken down into three categories of tourist and recreational paddling capability. Class 1 are rivers considered to be of exceptional value. These rivers must be protected because of their outstanding scenic value and canoeing experience. Class II rivers are classed as good but not exceptional. Class III are less significant in relation to their canoeing and kayaking capability and aesthetic experience, but which are still used for paddling."

This list of rivers prepared by the Yukon Voyageurs Canoe Club is presented as Table 4.

TABLE 4: PROVISIONAL LIST OF RIVERS IN THE TERRITORY IN TERMS OF TOURIST AND RECREATIONAL PADDLING CAPABILITY

Class I	CLASS II	CLASS III
Big Salmon*	Bell	Donjek
Lapie	Francis	White
McClintock	Hyland	Forty Mile
Nisling	Kluane	Klondike
Primrose	Little Salmon	Sixty Mile
Rose	McQuesten	
MacMillan & South MacMillan*	Morely	
Takhini	Nisutlin	
Watson	Pelly	
Wheaton	Rancheria	
Wolf	Ross	
	Stewart	
	Swift	
	Teslin	
	Yukon	

* Denotes exceptional wilderness river.

The recreational values that the Canoe Club places on these rivers are significantly different from those of other users. This appears to be because of the high value the club places on unspoiled wilderness.

Resident multi-day use is highest on the Yukon, Teslin, Big Salmon, Ross, MacMillan and Wheaton rivers. but use is wide-spread throughout the Basin.

Non-Resident Day Use

Non-resident day use of the recreational canoe is similar to the purposes of resident day use and include activities such as relaxation, fishing, swimming, and practicing canoeing skills. This user group requires little or no wind. The most highly used waterbodies for this user group are located by, and visible from highways, as the user generally decides to utilize the waterbody either by observation, or by direction from a local resident. Waterbodies that have high use by this group are Fox Lake, Tagish Lake and Kluane Lake.

Non-Resident Multi-Day Use

Non-resident use of water surfaces in the Yukon River Basin has risen substantially over the last 10 years, according to a number of different sources. In 1973 there were approximately 30 canoes for rent in Whitehorse. A survey in 1983 indicated approximately 170 were available (John O'Neil, pers. comm.). In terms of use, there were 1300 two canoe, twelve day parties reported in 1981. These were individuals taking part in non-guided wilderness experiences and this represented the largest single tourist draw for the Yukon wilderness/adventure travel industry. (Thorne, Stevenson & Kellogg, 1982.) The areas most popular with this group are the Yukon, Teslin and Big Salmon rivers, with most canoe rentals being for the Yukon River from Whitehorse to Dawson City (D. Howe, pers. comm.). The Big Salmon and Teslin rivers are highly used by guided wilderness tours, with two companies offering trips on the Big Salmon River. Other rivers used by guided wilderness tours include the Yukon, Ross, Primrose, South MacMillan and Pelly.

The popularity of recreational canoeing continues to increase in Yukon. While this growth appears to be distributed throughout the Yukon River Basin, the main increase is on rivers that have easy road access. This growth will cause some reduction in the quality of the environment and associated recreational experience because of improper practices by some users. These practices would be evident at obvious campsites, portage points and access and egress points. The rivers that will be most affected include: Yukon, Teslin, Big Salmon, Takhini and Wheaton. Interesting features as well as specific problems associated with water courses which receive high levels of use could be diseminated at access points.

Whitewater Boating

Whitewater boating has experienced rapid growth over the last ten years, both locally and throughout North America. A number of different crafts are specifically designed for whitewater boating: whitewater kayaks, whitewater canoes, modified recreational canoes and whitewater inflatable rafts. Most Yukon users have whitewater kayaks or modified recreational canoes.

Whitewater boating is represented in the Yukon by the Yukon Voyageur Canoe Club. The Canoe Club organizes lessons for members, runs slalom races on the Yukon and Wheaton rivers, and has sent members to the National Whitewater Championships. The current level of activity by whitewater boaters is hard to quantify. However, there are an estimated 100 whitewater kayaks in the Yukon (B. Daff, pers. comm.) and the Whitehorse Recreation Department runs two kayak courses each year with approximately twenty people taking part. The number of recreational canoes used for whitewater boating is even harder to estimate, as many recreational canoes are used interchangeably. An estimate of the number of recreational canoes used in this manner is 1500 (B. Daff, pers. comm.).

The most popular rivers for resident weekend whitewater boating are sections of the Wheaton, Takhini, Tutshi, and below the Whitehorse Dam on the Yukon River. Whitewater boaters require good access and egress, and dislike long sections of slow water. They are undeterred by low scenic values and other user conflicts as long as there is good whitewater, as evidenced by the high use of the area below the Whitehorse Dam with its power plant and concrete abutments. For longer trips, rivers such as the Rose, Lappie, Upper Ross and South MacMillan are popular. For these longer trips, factors relating to the quality wilderness experience such as scenic quality and wildlife values regain importance. Whitewater boaters appear to be sensitive to the same types of user conflicts that recreational canoeists experience (B. Daff, pers. comm.).

For tourists the Yukon River Basin is a major destination for whitewater boating. Most tourists come for the longer whitewater rivers such as the South MacMillan, Primrose, Hess and Upper Ross. Other whitewater boaters travel by vehicle and run the shorter easy access rivers such as the Tutshi, Lappie and Upper Takhini.

A growth rate of at least 10% per annum is expected to continue in this activity, as evidenced by the increasing popularity of courses for residents, and the growth of non-resident whitewater activity. This takes place on water surfaces that are less usable by other outdoor recreation groups, with the exception of anglers. Conflicts with other recreation users are minimal. Whitewater boating is incompatible only with hydro-power development.

Power Boating

Burton's 1977 study of participation in outdoor recreational activities indicated that 36% of the Yukon population participated in power boating. This figure is nearly ten percentage points higher than the corresponding rate for canoes.

There are a number of popular types of power boats in the Yukon River Basin, most of which use outboard motors. The most common of these are runabouts made of fibreglass or aluminium from 3.7 to 4.9 metres in length (12-16 feet) or freighter canoes from 5.5 to 6.7 metres in length (18-22 feet). These boats have motors of 10-35 hp and make up 80% of outboard motor sales (Greg Campion, pers. comm.). These boats are used for a variety of purposes, principally fishing and hunting. Inboard motor boats are generally 5.5 to 9.1 metres in length (18-30 feet) and cost $12,000 or more (Greg Campion, pers. comm.). Their use is generally restricted to the larger waterbodies that have boat launching facilities. Docking facilities are also desirable for this user group. Inboard motor boats also serve a variety of uses, with overnight crossings, fishing and hunting being some of the major uses.

The level of sales of outboard motors for power boats has been growing at approximately 12% per year, while the sale of inboard motor boats has almost come to a complete standstill over the last three years. This decline in the growth of inboard sales can be attributed to the higher price of gas, the high cost of the equipment, and their relatively poor fuel economy (Gred Campion, pers. comm.). Although comparative sales data exists, the number of power boats in use in the Yukon Basin is unknown.

Power boats are used for recreational activities throughout the Yukon River Basin but are limited by water depth, navigability, and access. As power boats are a major tool used by hunters and fishermen, those specific uses are described under separate headings. It is estimated that 50% of power boat use is on the major rivers of the Yukon River Basin - Teslin, Pelly, Stewart and Yukon (Greg Campion, pers. comm.). Outboard motors are commonly used by native people for subsistence hunting and fishing, and by trappers. Inboard motor boats are more restricted in their uses, and are found on the larger waterbodies in the system particularly the Southern Lakes, Marsh and Tagish. Large lakes such as Atlin, Laberge, Teslin and Kusawa are also utilized.

The use of power boats by recreational users occasionally causes conflicts with other water based recreationists because of noise and waves. Cottagers and recreational canoeists are most affected, since both seek a tranquil experience. Cottagers are bothered only occasionally by careless use of a power boat while recreational canoeists expecting wilderness experience may have their expectations shattered by the presence of power boats in some parts of the Basin.

Recreational use of power boats appears to be growing at approximately 8% per annum based on average sales of outboard motors and boats. Use patterns are currently distributed throughout the Yukon River Basin with the highest use on lakes and rivers that have easy road access. There are indications that power boat use has changed somewhat as fuel costs have increased, with more utilitarian use of the power boat to reach a destination rather than as a recreational end in itself. Power boats are also being increasingly used for hunting as the success rates of hunting from roadsides decline. This type of power boat use is expanding throughout the Basin on larger lakes and rivers that have road or trail access.

Sailing

In the last four to five years the number of sailboats in Yukon has increased to about 15-20. Four or five of these are equipped for cruising and the rest are designed for day use. Atlin Lake is the most popular cruising lake as the large number of islands offer many options for anchorages in bad weather, and add scenic variety to the crossing. Long narrow lakes such as Tagish, are not as popular because of the amount of tacking required to travel on them (Peter Steele, pers. comm.). Marsh Lake is considered ideal for small boat use, since the shallow water warms up quickly and winds are not funnelled by mountains. The lack of moorage makes it unsuitable for cruising.

While sailing conditions in the Yukon are rated excellent by knowledgeable sailors, there has not been any rapid growth in the user group, and little is expected. This is because few sailboats are available for purchase in the Yukon, there is a high investment cost involved, and there is a general lack of knowledge of sailing possibilities. There is no organization representing sailing in the Yukon (Peter Steele, pers. comm.).

No significant change in activity level is expected from current user groups. There is the likelihood of new user groups in this area, in particular, wind surfing. This activity has experienced a rapid growth rate in southern Canada and this growth could take place in the Yukon. There appear to be no major conflicts with other resource users.

APPENDIX VI

Proposed Management Strategy For Yukon Lakes

Department of Fisheries and Oceans, Whitehorse
1983

Introduction

Fishing pressure on Yukon lakes has increased substantially in recent years largely as a result of growth in the recreational fishery. This growth is reflected by the sale of sports fish licences which almost doubled between 1970 and 1980 to 17,000. There are indications that fishing effort will continue to increase in the future.

Since about 1980 there has been a sudden escalation of interest in the establishment of fly-in sports fishing facilities. In 1980, the Department of Indian Affairs and Northern Development in Whitehorse, received applications to lease land on 16 lakes for this purpose. When combined with existing fishing activity there was concern for the impact of this proposed additional development on the fishery resource. In response to this concern, a moratorium was established on the issuance of such leases to allow time for an investigation into the fishery potential of Yukon lakes. Information on productivity was required in order to predict the level of exploitation lake populations were capable of supporting and to enable an appropriate management strategy to be developed. Since establishment of the land lease moratorium, applications have been received for an additional 19 lakes bringing the total to date to 35.

Although fishing pressure is increasing, fish stocks in Yukon lakes are still in relatively good condition compared to those in most areas of North America. The challenge is to develop a management strategy which will allow Yukoners and visitors to continue to enjoy the type of fishing experience for which the Yukon is renowned without damaging the fish stocks.

Assessment of Production Levels

The first step taken in developing a management strategy was a review of existing information related to Yukon lake management. This was done through a contract to Howard Paish and Associates, a private consulting firm, and resulted in a report entitled "The Yukon Sport Fishery - A Policy Oriented Assessment of Sport Fishing in Yukon". The report pointed out the inadequacies of existing information and recommended that a program be established to acquire the data necessary to develop a management strategy.

Following this recommendation a program was initiated in 1981 to collect information that would allow estimates to be made of the fishery potential of Yukon lakes. The method utilized was one developed in Ontario in the 1960's which is based on the relationship between catch, total dissolved solids and mean lake depth. Total dissolved solids dividied by mean depth gives a value known as the morphoedaphic index (MEI). The latter is then plugged into an equation to provide an estimate of total fish yield. Since its development the MEI has been used successfully by fishery managers thoughout North America and in other parts of the world to provide an approximation of potential yields.

To date MEI and estimated total annual fish yields have been calculated for 67 Yukon lakes through our program. These include a mixture of road access lakes as well as many fly-in lakes popular with resident fishermen and lakes for which applications have been received to lease land for the purpose of establishing fly-in fishing operations. Yields calculated for Yukon lakes using the MEI were found to be generally quite low.

Having estimated the total yield for all fish species combined, the second step was to partition this into the various species components. One possible approach would be to determine the species composition in lakes and simply apply the same proportions to the total yield to provide an estimated yield for each species. In a sampling program undertaken in 1982 the proportions by weight of lake trout, lake whitefish and northern pike in seven lakes whre they occurred together averaged 21%, 42% and 23%, respectively. This would imply that 21% of the total fish yield of an average lake could be taken as lake trout. However, to compensate for release mortality and possible over-estimation of yield under Yukon conditions it is recommended that a provisional lake trout harvest level be set by multiplying the estimated total fish yield by 15%. This is in line with lake trout harvest levels recommended in other areas of Canada.

The attached table shows the estimated total annual yield for all fish species and for lake trout separately for 26 of the 67 lakes examined. These are considered to be provisional estimates subject to change as more specific information is acquired for each lake and as a better understanding of the applicability of the MEI to Yukon conditions is obtained. For unsampled lakes, as an interim measure, a harvest level of 0.50 kg/ha may be provisionally set for lake trout until productivity is determined.

Proposed Management Strategy

Having calculated provisional estimates of fish yield the next step was to develop a management approach that would ensure that the harvest did not exceed the productive capacity of the lakes. Given the small size of most Yukon lakes and the relatively low level of productivity it is clear that a conservative low-yield policy must be followed. Our policy will be to maintain lake trout stocks throughout the Yukon at a level consistent with our goal of providing optimal angler opportunities on large fish on a sustained yield basis.

The approach being recommended is to manage lakes individually on a quota system using the provisional yields calculated through the MEI. Because of the overwhelming importance of lake trout it is suggested that, initially, at least, quotas be set for this species only. This quota system would apply primarily to lakes on which commercial fly-in fishing operations occur.

There will be many unanswered questions to be faced when initiating a harvest quota. Each problem must be handled individually and decisions made on the basis of existing knowledge. The method outlined here will provide provisional figures for allowable harvest. As more information is obtained on species composition, non-commercial sport fishing activity and productivity, the quotas can be refined accordingly.

In order to accomplish our goal and to satisfy the needs of the fly-in sport fishing industry, now in the formative stages, the following management plan has been developed and is presented for your consideration.

1. It is recommended that the total lake trout quota for each lake be allocated so that, as a general rule, 50% would be available for commercial fly-in fishing operations and 50% for the general public. This allocation is not fixed but may vary according to the level of unguided sport fishing activity. The latter would be given higher priority and would include both resident and non-resident catches.

2. Individuals involved in commercial fly-in fishing operations shall be required to purchase a sport fishing guiding licence. Licences shall be required by:

(a) Any individual or company that holds a valid commercial land lease for the purpose of operating a sport fishing facility. These licences would be valid for a five year period.

(b) Any other individual or company engaged in sport fishing guiding activities within the Yukon Territory. These licences would be valid for a one year period.

3. The licences will stipulate the lake(s) on which guiding activity will be permitted. An individual or company may be restricted to a limited number of lakes to which the guiding licence may be applied.

4. Suitability of lakes for guided sport fishing purposes will be assessed by the Department of Fisheries and Oceans based on current use and level of productivity.

5. The fee for the sport fish guiding licence will be $___ annually.

6. A sport fish guiding licence holder must keep accurate up-to-date records of:

(a) the number of sport fishermen guided daily.
(b) the number of fish by species taken daily.
(c) the weight and length of all lake trout taken.
(d) the location from which the fish were taken.
(e) the fishing licence number of all clients guided.
(f) such other details and particulars as may be required.

Non-compliance could result in a withdrawal or non-renewal of licence privileges.

7. Anglers being guided by a licenced sport fishing guide shall be required to provide to that guide or to a Fishery Officer accurate information pertaiing to:

(a) the total number of fish taken by species.
(b) the location from which the fish were taken, and
(c) such other details and particulars as may be required.

8. To be eligible for a Yukon Sport Fish Guiding licence, applicants must be Canadian citizens, landed immigrants or a registered Canadian company.

TABLE 1: PROVISIONAL LAKE TROUT HARVEST QUOTAS FOR 26 YUKON LAKES

LAKE	AREA (ha)	ESTIMATED ANNUAL YIELD (kg)	LAKE TROUT QUOTA (15% of Total kg)	COMMERCIAL SPORT FISHERY LAKE TROUT QUOTA (kg)
Big Kalzas	4,220	5,450	820	410
Claire*	2,040	4,550	680	340
Coghlan*	823	3,550	530	265
Dalayee	1,060	3,400	510	255
Earn*	3,553	11,350	1,700	850
Fortin*	1,498	5,850	880	440
Fox	1,660	5,650	850	425
Frank*	586	2,800	420	210
Frenchmand	1,438	6,800	1,020	510
Jo-Jo * **	639	900	135	70
Little Salmon	6,210	9,400	1,410	705
Long*	1,390	3,200	480	240
McPherson*	927	2,200	330	165
Mandanna*	850	3,700	560	280
Moose*	1,385	3,150	470	235
Pelly*	1,980	3,400	510	255
Sambo*	1,136	1,400	210	105
Stokes*	1,390	3,400	510	255
Tadru*	1,360	3,200	480	240
Tatlmain*	3,381	10,100	1,520	760
Tillei*	2,004	5,300	800	400
Tincup	1,790	2,950	440	220
Toobally-Lower	983	2,850	430	215
Toobally-Upper*	1,060	3,750	560	280
Wellsely	7,381	24,300	3,650	1,825
Wolf	7,350	13,800	2,070	1,035

* Lakes for which applications have been received for the purpose of developing fly-in fishing facilities.

** The 1982 inventory found lake trout in JoJo Lake to comprise of the total catch by weight with the remainder being grayling. In this case the blanket figure of 15% for lake trout would be an underestimate of potential harvest.

APPENDIX VII

Conclusions and Recommendations from:

The Yukon Sport Fishery:
A Policy Oriented Assessment of
Sport Fishing in Yukon

Summary Document

By Howard Paish & Associates Ltd., 1981

THE FUTURE OF YUKON SPORT FISHERY

Conclusions

Given the background that has been described, what are some conclusions that can be made about the likely future of the Yukon sport fishery?

1. The Yukon sport fish catch over at least the past 10 years has almost certainly exceeded the natural productive capacity of lakes accessible by road. Since the number of anglers is unlikely to decline, it is likely that the quality of the fishery, as measured in numbers and size of fish caught, and angler satisfaction will continue to decline, unless positive management measures are taken to prevent or check that decline.

2. Fortunately, for most Yukon waters, the decline is probably in its early stages, and can be corrected by appropriate management measures which must include:
   - (a) the collection of basic information to establish the productivity of individual lakes and streams;
   - (b) a far better understanding of the existing use of the sport fishery;
   - (c) information on fish population structures in the lakes and streams that are most heavily fished and where intensive management is deemed necessary;
   - (d) the protection of fish habitat;
   - (e) a harvesting strategy that ensures catch does not exceed production;
   - (f) protection of spawning stocks through angling closures where necessary;
   - (g) public involvement and information programmes to ensure

angler cooperation in management, and to explain the need for management measures;

(h) enforcement and monitoring to ensure that the management measures are being implemented and are effective;

3. The kind of regulatory measures needed will involve some reduced bag limits, possible overall season bag limits for lake trout and area restrictions to protect spawning stocks.

The actual measures likely needed would have virtually no effect on most anglers, but would apply principally to the most skilled and experienced fishermen who catch most of the fish.

4. In view of the high proportion of angling opportunity and catch provided by wild native stocks (97%), the major emphasis should be on the management of these wild stocks, principally Arctic grayling, lake trout and northern pike, with a particualr emphasis on lake trout. Until better information is available for specific lakes, a conservative low yield management approach should be followed using not more than 10% of the estimated production as the allowable yield or catch.

5. Since lake stocks are subject to far more use than streams, and seem to be far more vulnerable to angling pressure, the first management priority should be given to lakes. The highest priority among lakes must be given to those accessible by road and to those lakes used by commercial sport fishing operations.

6. Fish stocking programmes should be continued and should concentrate on the provision of new fisheries in areas of high demand.

7. The salmon and Arctic char sport fisheries should be managed as the independent fisheries that they are and the management rationale developed in this report does not necessarily apply to them, instead

their management must be a part of the overall management of anadromous (salmon) stocks.

8. Fly-in fishing for tourists and residents is increasing in popularity. Competition between the two groups is best solved by geographic separation. Commercial sport fishing ventures should be required to operate in the areas least accessible to residents. This is in the best interest of providing quality service to visitors as well as avoiding competition and overuse of fish stocks.

Specifically no new fly-in fishing operations should be permitted within 100 air miles of Whitehorse or 75 air miles of Watson Lake.

9. In order to ensure the rational development of commercial sport fishing ventures, a system of tenure should be granted on an area basis similar to the present system for guide outfitters. Such a system should safeguard the interests of existing operators and permit the development of new businesses.

10. The form of tenure granted should be a licence instituted and regulated under the Fisheries Act. The present system of implied tenure through commercial land leases and development is unsatisfactory.

Quotas should be established for individual lakes used by commercial sport fishing operations, and quotas for such fishing should never exceed 50% of the allowable quota for any lake, to avoid competition with resident users.

Detailed monitoring of the catch from all lakes is required. In the case of commercial sport fishing lakes, such monitoring should be a requirement for a licence to operate, similar to the returns provided by big game guides.

11. The initial information required to establish fish production and yield should be gathered by the Department of Fisheries and Oceans. Should a commercial operator request a higher yield than that allowed by the Department, the information required to make such a decision should be a cost to the operator and should be gathered through a programme jointly agreed to by the operator and the Department.

12. The level of management of the Yukon sport fishery to date has not been in keeping with the importance of the fishery to Yukoners. The Pacific Region of the Department of Fisheries and Oceans should seriously consider whether or not, on technical and administrative grounds, the fishery can best be managed by the region in light of region wide responsibilities. The alternative would be for the Yukon Territorial Government to assume responsibility for sport fish management, recognizing that the Department of Fisheries and Oceans would still maintain responsibility for salmon and much habitat protection.

13. Sport fishing affects many individuals and its management should be responsible to local interest and demand. The Yukon Territorial Government could provide such local response.

Technically the Department of Fisheries and Oceans could move more quickly into the implementation of a sport fish management programme, and should do so, pending political resolution of the transfer question. The Department has the jurisdiction and administrative responsibility at present, and only a regional commitment and priority for the Yukon sport fishery has been lacking.

Regardless of any transfer, a strong case can be made for very close cooperation between the management of the inland sport fishery and the salmon fishery in order to avoid the duplication of government costs.

14. There is an overwhelming need to relate fish production use and access to the resource to specific production goals, in terms of quantities of fish and angler use and satisfaction. Such goals should be substituted for the existing reactive protection rationale on questions of inter-resource conflicts and cooperative resource management.

15. The angling public in Yukon has enjoyed a high quality fishery that is generally taken for granted as part of the northern way of life.

A well developed public involvement information and education programme will be required to explain the need for a more intensive approach to fisheries management, and to ensure that anglers' views, interests and perceptions are incorporated in that management. Particular emphasis can be placed on the use of community support and labour for appropriate habitat and access improvement programmes.

16. There is considerable scope for improving angling opportunities through the development and improvement of access to under used lakes and streams. Such programmes should concentrate on trail access in order to ensure conservative use. Such programmes lend themselves well to community involvement and to cooperation with other agencies involved in outdoor recreation management.

17. There is a unique opportunity for the creation and development of a bold forward-looking sport fish management programme in Yukon, that could be a model for North America. The resource is still in good shape, for the most part, and Yukon shape, for the most part, and Yukon has the benefit of the experience from other areas who have had similar opportunities and problems in the past, and to learn from their successes and failures.

The emphasis should be on the unique opportunity to do the job well, not solely on problems, and certainly not on an "inquest" on the past.

The end result will be the continuance in Yukon of one of the best, yet least regulated, sport fisheries anywhere in the world.

RECOMMENDATIONS

1. We recommend that the Department of Fisheries and Oceans assign a high priority to the management of inland freshwater fish species in Yukon. This priority should be reflected in the provision of the manpower and budget required to initiate the programme outlined in this report, or an appropriate programme that would achieve similar results.

2. We recommend that the low yield management strategy detailed in this report be subject to government agency and public discussion, and with appropriate modification reflecting such discussion, be adopted as the management rationale for the Yukon sports fishery.

3. We recommend that an active management programme be established that leads to the setting of specific fish production and angler use goals for individual water bodies, and stream drainage units based on the biologial productivity of those lakes and stream units.

4. We recommend that the primary emphasis for Yukon Sports Fish Management be placed on wild native species and that particular attention be paid to lake trout management.

5. We recommend that initial management priority be given to lakes under 10,000 ha. that are available to road access, or that are used by commercial sport fishing camps.

6. We recommend that lake stocking be considered only for the creation of sport fisheries where native wild stocks cannot satisfy angler demand.

7. We recommend that a management programme for streams and rivers be established on a "corridor" network related to the Territories' highway system.

8. We recommend that management responsibility for the Yukon inland fishery, exclusive of anadromous fish, be transferred to the Yukon Territorial Government within the next four years. The political jurisdictional and administrative aspects of such a transfer need considerable further refinement that will depend in part on the outcome of Land Claim Negotiations. In the meantime, the Department of Fisheries and Oceans has the mandate and technical capability to initiate the type of programme needed to ensure the well-being of the resource, pending a decision on a transfer of management responsibility.

9. We recommend that the Department of Fisheries and Oceans take the lead role in the establishment of a permanent inter-agency committee to deal with all inter-agency fishery matters, similar to the committee established for the supervision of this study. Such a committee should place a high priority on the avoidance of any duplication of manpower and support services within government related to fisheries management.

10. We recommend that commercial sport fishing operations be licenced and regulated under the Fisheries Act by the 1982 licencing year.

*That specific lakes be allotted to such operations for commercial sports fishing purposes.

*That quotas based on productivity and yield be established for each lake.

*That not more than 50% of the annual yield of any lake be allotted to commercial sport fishing operations.

*That no quota be established on any lake, that does not support an existing sport fishing lodge, within 100 miles of Whitehorse or within 75 miles of Watson Lake.

*That operations be rquired to keep catch records as a condition of licencing.

11. We recommend that the Federal/Territorial Lands Advisory Committee, and the Department of Indian and Northern Affairs consider the granting of land dispositions for commercial sport fishing operations in the light of the quotas available for the lakes on which land dispositions are sought.

12. We recommend that Yukon sport fishing licence fees be established as follows for the 1982 licencing year:

Yukon Resident	$7.00
Canadian Resident	$7.00
Non-resident (5 day)	$10.00
Non-resident season	$25.00
Trophy Lake	$25.00

13. We recommend that this report be summarized and published in a form suitable for distribution to Yukon anglers, lodge operators and others interested in sport fish management. Such a document should be a starting point for an active public involvement programme to enable anglers and others to participate in sport fish management.

APPENDIX VIII

Summary of Recreational Capabilities of Sub Basins in the Yukon River Basin

From: Inventory, Analysis and Evaluation of the Recreational Capability of the Yukon River Basin

Reid Crowther and Partners Ltd., 1983

Lower Yukon Sub-Basin

Recreation Potential

Recreation potential is high for the entire mainstem Yukon from Carmacks to Alaska. This section is rich in natural and historical features, and is accessible and easily navigated.

Lakes

Frenchman Lake (Stewart River map) has high recreation potential, being scenic and well suited for boating and fishing. Tatchun and Von Wilczek lakes have medium potential by comparison, possessing few outstanding features.

Rivers

The Forty Mile, Sixty Mile, Lower Klondike, North Klondike and Indian rivers have low potential for water based recreation. Bonanza Creek and Coffee Creek are also in this category. Conflicting uses and poor water quality from placer mining activity reduce the recreational potential of these rivers, although the Klondike and Forty Mile provide enjoyable whitewater paddling.

The potential of the Fifteen Mile and Chandindu Rivers is unknown. Access to these rivers is low and available information is limited. The Fifteen Mile River has been identified as the eastern border of a proposed federal park, while the Chandindu intersects ESA #10, IBP site 65, and a territorial park reserve.

Stewart River Sub-Basin

Rivers

Below Mayo, the Stewart River is broad, deep, easily navigated and accessible by road. Although it possesses few outstanding features, the Stewart is considered to have high overall recreational potential.

The upper Stewart and its tributaries, the Hess and Rouge rivers, are not often used, but are considered to be high quality wilderness whitewater rivers. Access to their headwaters is by air; scenic qualities are high, and the paddling experience for wilderness canoers and kayakers is excellent. Little is known about the Lansing, Nadaleen and East Rackla rivers. Incomplete information indicates that these may have similar wilderness canoeing potential.

The South McQuesten and McQuesten rivers have medium overall potential, with serious conflicting uses resulting from forestry and mining activities. These rivers, like the lower Stewart, receive little tourist use but are often floated by local residents for recreation, hunting and fishing. Little is known about the North and East McQuesten rivers.

Lakes

The Hess Mountains have more than a dozen lakes of significant size in the upper Stewart, Hess and Route river watersheds. All require air access, and information is very limited. Emerald and Keele lakes are in ESA No. 13. Keele Lake has very high scenic and natural values and is part of a designated Area of Interest, and a Parks Canada Natural Area of Canadian Significance. An outfitter's base camp is also located by the lake.

Misty Lake is a scenic, semi-alpine lake which provides air access to the headwaters of the Stewart River. Many lakes in the upper subbasin are un-named and have not been inventoried, but have potential as fly-in access points for wilderness river travellers.

The Mayo district has a number of large lakes with road or trail access which are used by local residents for hunting, fishing and boating. These lakes generally have medium recreational potential. Mayo Lake has some conflicting uses with placer mining and hydro development and supports commercial fishing. McQuesten Lake also has some placer activity and is important Canada geese habitat. Hanson Lake also has some placer activity. Ethel Lake is the site of a proposed Yukon Territorial Government Park Reserve and is part of ESA No. 15. Most other lakes have unknown potential.

Pelly River Sub-Basin

Recreation Potential

The Pelly River Basin provides outstanding recreational opportunities particularly for wilderness paddlers.

Rivers

The South McQuesten River has gained an international reputation as a wilderness canoeing river. It is inaccessible for the 480 km trip to Pelly Crossing, but has road access near its headwaters. This is the longest section of river between access points in the Yukon River Basin. It has high scenic, wildlife and fishing values and provides enjoyable whitewater paddling opportunities. The upper South MacMillan is the primary route by which canoe parties travel over the divide to the South Nahanni River. Involving arduous upstream lining and portaging, this route is famous as a quality wilderness traverse. Below the Riddell River, the river is usable by power boats and conflicting uses including mining and logging are evident.

Below Faro, the Pelly River provides another lengthy remote section of the river. The Pelly is increasingly used by recreational canoeists who incorporate it into a Ross River or a South MacMillan trip. Residents of Pelly Crossing, Faro and Ross River frequently use the Pelly.

The Ross River is a high quality wilderness whitewater river which is readily accessible below Sheldon Lake. Canoers may alternately fly into the scenic Itsi Lakes for a more remote start.

The North MacMillan, the upper Pelly and the Prevost are said to be high quality wilderness fly-in rivers, but little information is available. Little is known about the recreational potential of the Tay, Kalzas, Tummel, Woodside and Hoole rivers. The Lapie is a popular weekend whitewater river used by residents of Whitehorse and Faro.

Lakes

Few lakes in this sub-basin have road access. An exception to this is the Sheldon/Lewis/Field chain which has extremely high scenic and wildlife values and high recreational potential. Dragon Lake is also accessible from the North Canol Road and has high recreational potential and a boat launch. Bruce Lake and Detour Lake have road access, but few outstanding features.

The Itsi Lakes have high scenic and recreational values, but require air access. The Pelly Lakes and Fortin Lake have similarly high scenic and wildlife values and support commercial fly-in fishing. The old Pelly Lakes village site is of significance to the Native people of Ross River who can reach it by travelling upstream in power boats above Hoole Canyon. These lakes have had some mining activity. Big Kalzas Lake has high scenic and recreational values and supports both commercial and fly-in sport fishing. Tatlmain Lake also has commercial sport fishing, but has unknown recreational potential. Most remaining lakes in the Pelly sub-basin have unknown recreational potential, but several have recognized scenic qualities and fishing capabilities that may merit attention for fly-in fishing.

White River Sub-Basin

Recreational Potential

Rivers

The Kluane, Koidern, Donjek and White rivers have medium recreational potential. All have two-way road access but possess few outstanding features. The White and Donjek have braided channels, silty waters and obscured shallows with frequent sweepers and log jams. The silty flood plains are less visually aesthetic than vegetated or rocky banks. Also they are the source of frequent dust storms. The Kluane River and Koidern River are better suited to recreational canoeing, but the Kluane discharges into the Donjek and the Koidern has a low volume and is often shallow. Bald eagle sites are found on the Kluane and Donjek rivers. The Nisling River is a high quality wilderness canoe river with primitive trail access which has high future potential if access and information improve. Little is known of the Klotassin, Klaza and Ladue rivers.

Lakes

Kluane Lake has extremely high recreational value and has good access, facilities, scenery and available information. It supports a high number of recreational user groups, as well as a commercial fishing operation. Pickhandle Lake on the Alaska Highway also has high recreational potential with good access and scenery. This lake is used as a staging area for spring and fall waterfowl migrations.

Wellesly Lake is reputed to be the best sport fishing lake in the Yukon and supports a fly-in commercial sport fishing lodge. It is also an important swan habitat. Tincup Lake has rugged mountain scenery and is a fly-in sport fishing lake. The Gladstone Lakes are also used for commercial sport fishing and have an outfitter's camp and occasional mining activity. They are in an area suitable for a potential National

Park. Stevens Lake has low potential, with difficult trail access, but it is the start for the Nisling River Canoe trip. The lake is a potential hydro site and is included in the proposed Kluane-Aishihik National Park. Fish-hole, Teepee, Toshingermann and Tchawshamon lakes have unknown potential.

Teslin River Sub-Basin

Recreational Potential

Rivers

The Teslin River has the second highest recreational use in the Yukon, being frequented by local and tourist canoers and power boaters, and at least one commercial operator. The customary access point is Johnsons Crossing, with egress at Carmacks or Dawson City. The Teslin River is an important fishing resource for Native people. Extensive placer mining staking along the river has detracted from some user's enjoyment and has the potential for being a major conflict.

The Nisutlin with its tributary, the Rose River, has high use from a variety of users. It is a quality wilderness canoeing river with local, tourist and commercial use. It is accessible from two points on the South Canol Road and offers high wildlife and waterfowl viewing and hunting opportunities. The marshes at Nisutlin Bay are an important waterfowl staging area.

The Wolf River is an exciting whitewater river with demanding sections for canoers and kayakers. It has poor trail access and is usually reached by air.

The Swift River is an accessible whitewater canoe river and passes through areas of good wildlife habitat. A B.C. Park and Recreation Map Reserve is located at its juncture with the Teslin River. Another tributary, the Smart River, has low potential with medium canoeing suitability due to frequent portages.

The lower Morley parallels the Alaska Highway and is a whitewater day use river with one waterfall. The Morley River has some slow sections above Teslin Lake which are used by power boaters for hunting. Little information was available for the upper Morley, Jennings, Hayes, Kedahda, Boswell or upper Teslin rivers.

Lakes

Like the Teslin River, Teslin Lake has high recreation potential. It has good access and many facilities for recreationists. It is extensively used by local residents for fishing and hunting and supports commercial net fishing. Forty-five cottage sites pose slight conflicts with other users and could potentially contribute contaminants from primitive sanitary facilities. The narrow configuration of the lake makes it only moderately attractive for sailboats.

Squanga, Summit, Little Teslin, Morley and Swan lakes are accessible by road. All have medium recreation potential with no particular conflicts other than those posed by the 17 cottage lots on little Teslin Lake.

The following lakes have fly-in sport fishing: Baker, Dalayee, Gladys, Hall, Sterlin, Teena. No conflicting uses are apparent other than five cottages on Dalayee Lake. The remaining lakes in this subbasin have unknown potential.

Upper Yukon Sub-Basin

Recreation Potential

Rivers

The Yukon River from Marsh Lake to Carmacks has high recreational potential. It is the most heavily used river in the entire Basin and supports a wide variety of recreational user groups. As an historic wilderness canoe trip, the Yukon River has international appeal and is accessible from many points. It is an important commercial guiding and canoe rental attraction. Residents and tourists use power boats above and below the Miles Canyon Dam and the section above Carmacks is used by locals for hunting and fishing. Whitehorse kayakers frequent the outfall of the dam for whitewater training. The Lake Laberge section has reduced values, with some conflicting uses and periodic raw sewage discharge.

The Big Salmon is an important recreational river frequently used for wilderness canoe trips terminating at Carmacks or Dawson. At least five outfitters offer guided trips on the river which now has an international reputation for wilderness scenery. Placer mining staking and proposed dredging pose a potentially serious conflict. The river environment is also showing signs of heavy use: some campsites appear trampled and littered.

The Takhini River between Kusawa and Mendenhall receives high use by residents for day use canoeing, boating and fishing. It has a popular whitewater training stretch and is easily accessible. Conflicting uses are cottaging and placer squatting within scenic, designated ESA site. This river has the highest day use of any river in the Basin.

The Wheaton River is heavily used by local canoers and kayakers. The upper section is most often paddled, having enjoyable whitewater easy access. The full stretch to Bennett Lake is usually avoided, since Bennett has a reputation for squall winds. Placer squatting is a problem on this river.

The Watson River is another accessible whitewater river, but receives less attention than the Wheaton because of generally lower recreation values.

Tutshi River is a world class whitewater stream which receives much use by locals and tourists. It has Grade 3 and 4 rapids and several drops in excess of one metre. Its accessibility adds to its popularity, and it is identified as a B.C. Park and Recreation Map Reserve. Ibex River has road access, but low potential because of shallowness. The Nordenskiold River's potential is similarly reduced by sweepers which span the entire river. The Primrose River is a high quality wilderness whitewater river with fly-in access. It is used by a comercial recreational outfitter and is suitable for advanced paddlers. Once a proposed hydro site, proposals also have been advanced for a recreation lodge and for trails that would connect with the Whitehorse area. The Little Salmon River has been used by canoers and power boaters for weekend excursions. Its lower portion is part of the Little Salmon-Columbia Slough Development Area.

The recreational potential for remaining rivers in the sub-basin is low due to poor access, low volume or conflicting uses, or is unknown.

Lakes

Of the headwater lakes, Atlin Lake has historic features, scenery and boating suitability that results in this lake being extensively used by residents and tourists. Two commercial wilderness guiding concerns use Atlin Lake, which also supports the most sailing activity in the Yukon Basin.

The lake has some cottaging and commercial fishing. A proposed control station on the Atlin River would affect water levels on the lake.

Tagish Lake has high potential for a variety of users with 142 cottage sites on the lake. There is some conflict between staging waterfowl and recreational boaters. Tagish Lake has been designated as a Major Natural Area and also a Development Area. Squall winds and narrow configuration reduce the craft suitability for Bennett, Tutshi and Taku Arm. Most of Taku Arm is relatively remote for road access. Kusawa is a high potential, scenic lake that receives high use. It has some cottaging and an outfitter's camp, and is a proposed Territorial Park.

Fish, Tarfu, Fox, Little Fox, Braeburn, Surprise, Annie, Little Salmon, Little Atlin and Quiet lakes have medium recreation potential, with good road access. Other than cottaging, these lakes have no conflicting uses at present.

Other lakes in the Basin have only fly-in access or poor trail access. Several are used for fly-in sport fishing, principally Alligator, Coghlan, Frank, Jo-Jo, Long, Mandanna, Michie and Taye lakes. For many lakes in this region poor or incomplete information prevents a full assessment of recreation capability.